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REPORT
ON THE
HEALTH OF THE CITY
OF
BIRMINGHAM,

FOR THE YEAR 1902,

BY
ALFRED HILL, M.D., F.R.S.E., F.I.C.,

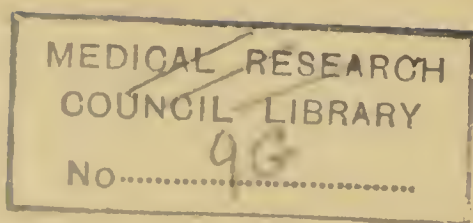
*Past-President of the Society of Medical Officers of Health;
Past-President of the Society of Public Analysts; Late Examiner in Public
Health to the University of Aberdeen; Fellow of the Sanitary
Institute; Fellow of the College of State Medicine; Fellow
of the Incorporated Society of Medical Officers
of Health;*

MEDICAL OFFICER OF HEALTH TO THE CITY.

PRINTED BY ORDER OF THE HEALTH COMMITTEE.

BIRMINGHAM:

HUDSON AND SON, PRINTERS. EDMUND STREET AND LIVERY STREET.



at to Prof.Greenwood,
School of Hygiene.

With the
Medical Officer of Heath's Compliments.

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HEALTH DEPARTMENT,

THE COUNCIL HOUSE,

BIRMINGHAM,

March 24th, 1903.

TO THE HEALTH COMMITTEE.

MR. CHAIRMAN AND GENTLEMEN,

I beg to present to you my Report for the year 1902, Introductory Remarks. which is my thirtieth report as Medical Officer of Health for the City.

It is a great pleasure to me to point out that the death-rate for the year was the lowest ever recorded in Birmingham.

The report directs attention to the extensive prevalence of scarlet fever and diphtheria, as well as to the outbreak of small-pox. An account is also given of the procedure recently adopted for checking the spread of consumption.

The parts of the report dealing with the sanitary condition of the City show that in many directions considerable advance has been made. I have again, however, had to express my opinion that the supply of suitable houses for the labouring classes is inadequate and needs to be increased.

In March, 1902, I was relieved of the duties of Public Analyst, after performing them for 41 years. My chief assistant during the preceding 16 years, Mr. John Francis Liverseege, F.I.C., Ph. C., was appointed to succeed me, so that the appended report on the proceedings taken under the Acts for the Prevention of Adulteration includes the analytical work done during the year by each of us.

POPULATION.

The population of the city at the middle of 1902, Population. estimated on the assumption that the same rate of increase has continued since the taking of the Census as existed previously, was 528,181, or about 5,000 more than at the middle of 1901. According to the returns kindly supplied to me by the Overseers of the various parishes, the number of inhabited houses was about 110,500.

CENSUS OF 1901.

During the past year the Census returns for Warwickshire were issued, and they give a large amount of interesting information relating to Birmingham.

Population and
houses at
census

The population of the city at the time of the Census was 522,204, and the number of inhabited houses was 107,831, giving on an average 4·8 persons to a house. At the previous census in 1891 there were 95,516 inhabited houses with 5·0 inmates per house. Thus the number of inhabited houses shows an increase during ten years of over 12,000, while the average number of persons per house has fallen from 5·0 to 4·8. In addition to the 107,831 inhabited houses, there were 4,883 which were in occupation either for business or residential purposes, but in which no one slept on the night of the Census. There were also 3,372 void houses, and 401 houses in course of building.

Decrease in
three-roomed
tenements.

An interesting feature revealed by the Census returns is that the number of three-roomed tenements has fallen during the last ten years from 36,242 to 34,753, a decrease of about 1,500. Many of the three-roomed tenements were occupied by a large number of people, 5,396 containing seven or more inmates.

Population at
various ages.

The population was distributed over the different ætal periods in the following manner:—

Under 1 year	...	...	...	...	...	13,767
Between 1 and 5 years	...	...	...	...	...	49,075
" 5 " 10	...	...	...	...	...	55,214
" 10 " 15	...	...	...	...	...	52,420
" 15 " 25	...	...	...	...	...	110,585
" 25 " 45	...	...	...	...	...	151,792
" 45 " 65	...	...	...	...	...	71,594
Over 65 years	...	...	...	...	...	17,757

Death-rates at
various ages.

The number of persons living at different ages is of great importance for statistical purposes, because of the widely divergent death-rates which always exist at different periods of life. To illustrate this I have calculated the death-rates at the above ætal periods for the three years, 1900-1902, that is the three years of which the Census year is the middle one. The death-rates are as follows:—

Under 1 year	...	...	...	...	...	222·7
Between 1 and 5 years	...	...	...	...	...	27·5
" 5 " 10	...	...	...	...	...	3·9
" 10 " 15	...	...	...	...	...	2·1
" 15 " 25	...	...	...	...	...	3·7
" 25 " 45	...	...	...	...	...	9·2
" 45 " 65	...	...	...	...	...	28·1
Over 65 years	...	...	...	...	...	99·4

By far the most important consideration in connection with the above figures is the enormous waste of infant life, the mortality among infants being more than ten times as large as that of the population as a whole.

According to the Census returns the population was located in the various wards as shown below :—

	Population in Wards.
Rotton Park	49,687
All Saints'	42,995
Ladywood	25,189
St. Paul's	14,954
St. George's	20,230
St. Stephen's	23,765
St. Mary's	16,333
St. Bartholomew's	26,857
Market Hall	9,807
St. Thomas'	19,382
St. Martin's	23,950
Edgbaston and Harborne	30,997
Deritend	24,704
Bordesley	54,686
Duddeston	23,921
Nechells	33,624
Balsall Heath	38,827
Saltley	42,296

Very great disparity exists in the populations of the various wards, the largest number of inhabitants being 54,686 in Bordesley, and the smallest 9,807 in Market Hall.

Most of the central wards have decreased in population in the interval between the two Censuses, while the newer and outlying wards have for the most part increased. The actual increases and decreases between 1891 and 1901 have been as follows :—

Rotton Park	+10,474
All Saints'	+ 3,819
Ladywood	- 1,839
St. Paul's	- 3,768
St. George's	- 1,405
St. Stephen's	+ 215
St. Mary's	- 626
St. Bartholomew's	- 745
Market Hall	- 2,888
St. Thomas'	- 1,126
St. Martin's	- 1,780
Edgbaston and Harborne	+ 3,824
Deritend	- 2,652
Bordesley	+14,152
Duddeston	+ 725
Nechells	+ 1,566
Balsall Heath	+ 8,246
Saltley	+17,899

MARRIAGES.

The number of marriages registered in the city in 1902 is 5,120, equal to a marriage rate of 19·1 per 1,000. During

the last 10 years the marriage rates have been as follow :—

	Marriage-rate per 1000.
1893	16.9
1894	17.3
1895	17.9
1896	20.0
1897	21.9
1898	20.9
1899	20.8
1900	18.9
1901	18.8
1902	19.1

BIRTHS.

Birth-rate.

The births recorded during the year were equal to a birth-rate of 31.9 per 1,000, a very low figure. Only once before has the birth-rate been so low, viz., in 1894, when it was only 31.6. The highest rate ever reported by me was 42.5 in 1876.

DEATHS.

Death-rate.

It is gratifying to find that the death-rate for the year was the best in my records, being only 18.0 per 1,000. The death-rate was as much as 2.2 per 1,000 below the average for the previous ten years. The next lowest death-rate to the one under notice is 18.2, which was recorded in the year 1888 and again in 1894. On no other occasion has the death-rate fallen below 19.0 per 1,000.

In a town the size of Birmingham the lowering of the death-rate to so great an extent means the saving of a very large number of lives. If the death-rate last year had been the same as the average for the previous ten years, viz., 20.2 per 1,000, there would have been 10,844 deaths, whereas the actual number was 9,672, a saving of 1,172 lives.

Of course this saving of life must have been accompanied by a corresponding decrease in the amount of illness, and when both these facts are taken into consideration, the lower death-rate must afford great cause for satisfaction.

Death-rates in
other large
towns.

In the whole of England and Wales the death-rate last year was 16.3 per 1,000, against an average of 17.9 in the previous ten years. The death-rates in the six towns most nearly comparable with Birmingham were as follows :—

London	17.2	per 1000
Liverpool	21.6	..
Manchester	20.0	..
Birmingham	18.0	..
Sheffield	16.9	..
Leeds	17.6	..
Bristol	17.3	..

The mortality varied greatly in different parts of the town, the death-rates in the various wards being as follows :—

					per 1000
St. Stephen's	...	...	...	26.5	
St. Mary's	...	...	...	24.8	„
St. Bartholomew's	...	...	...	24.6	„
St. George's	...	...	...	21.6	„
Duddeston	...	...	...	21.3	„
Deritend	...	...	...	20.3	„
St. Martin's	...	...	...	20.3	„
St. Thomas'	...	...	...	20.1	„
Nechells	...	...	...	18.7	„
St. Paul's	...	...	...	18.2	„
Ladywood	...	...	...	17.3	„
Market Hall	...	...	...	16.9	„
All Saints'	...	...	...	15.5	„
Saltley	...	...	...	15.1	„
Balsall Heath	...	...	...	14.8	„
Rotton Park	...	...	...	14.4	„
Bordesley	...	...	...	13.4	„
Edgbaston and Harborne	...	...	...	12.3	„

As usual the worst ward in the list has a death-rate about twice as great as the best. Moreover, generally speaking, the same wards occupy good or bad positions as in previous years, and there can be no doubt that the persistently higher mortality of some is the result of the inferior sanitary and social conditions which prevail there.

If the ward with the lowest death-rate is counted first, and the ward with the highest death-rate eighteenth, the positions of the various wards in the last four years have been as follows :—

			1902	Position in			1899
				1901	1900		
Edgbaston and Harborne	...	...	1	1	1		1
Bordesley	...	...	2	3	2		2
Balsall Heath	...	...	4	2	3		3
Rotton Park	...	...	3	4	5		5
Saltley	...	...	5	7	4		6
All Saints'	...	...	6	6	7		4
Market Hall	...	...	7	5	10		7
Ladywood	...	...	8	8	6		8
St. Paul's	...	...	9	12	8		11
St. Martin's	...	...	12	9	11		9
St. Thomas'	...	...	11	10	9		13
Nechells	...	...	10	12	11		12
Deritend	...	...	12	11	14		15
Duddeston	...	...	14	14	13		10
St. George's	...	...	15	14	15		14
St. Bartholomew's	...	...	16	16	17		17
St. Stephen's	...	...	18	17	15		16
St. Mary's	...	...	17	18	18		18

There seems to be very little change from year to year in the relative positions of the different wards, Edgbaston and Harborne, Bordesley, and Balsall Heath being almost always the three best, and St. Mary's, St. Stephen's, and St. Bartholomew's the three worst.

I am very desirous of finding out in greater detail what parts of the city suffer an abnormally high mortality, with the view to discover what can be done to reduce it. I hope ere long to receive further information from the Census Office which will enable me to calculate the death-rates in individual streets, and thus to ascertain which streets need particular attention, so that a more normal mortality in them may be attained. From special inquiries which I have made at different times I have already learned that there are streets in some of the worst wards, such as St. Mary's, St. Stephen's, and St. Bartholomew's, with death-rates as high as 40 per 1,000.

INFANT MORTALITY.

Infant mortality

As a rule one of the most distressing features in the statistics relating to large centres of population is the very high mortality among infants. It is pleasing to report, therefore, that last year the infantile mortality in Birmingham was unusually low, being at the rate of 157 infant deaths per 1,000 births, against an average of 189 in the previous ten years.

The reduction in the infant mortality was mainly due to the small number of deaths from diarrhœa, to which I shall have occasion to refer in a later part of my report.

In the whole of England and Wales the infant mortality rate was 133 per 1,000, against an average of 154 in the previous ten years.

INFECTIOUS DISEASES.

Zymotic death-rate.

The deaths from the seven principal zymotic diseases, viz., small-pox, measles, scarlet fever, diphtheria, whooping-cough, fever, and diarrhœa, numbered 1,397, and were equivalent to a zymotic death-rate of 2·6 per 1,000.

Deaths from zymotic diseases

The deaths from the individual diseases were as follows :—

	Deaths in 1902.	Average for 5 years 1897-1901*.	Above or below the average.
Smallpox	4	0	+ 4
Measles	189	249	- 60
Scarlet Fever	293	86	+ 207
Diphtheria	130	172	- 8
Whooping Cough	269	240	+ 29
Typhoid Fever	100	124	- 24
Diarrhœa	412	780	- 368

* Corrected so as to be comparable with the figures for 1902, which comprises 53 instead of 52 weeks.

Cases of notifiable diseases.

The subjoined figures show the prevalence of those diseases which are notifiable under the Infectious Disease (Notification) Act.

	Cases notified in 1902.	Average for 5 years, 1897-1901.*	Above or below the average.
Small-pox ...	69	0	+ 69
Scarlet Fever ...	5044	2014	+ 3030
Diphtheria ...	787	651	+ 136
Typhoid Fever ..	544	696	- 152
Continued Fever ..	3	6	- 3
Relapsing Fever ...	1	0	+ 1
Puerperal Fever ...	35	29	+ 6
Erysipelas ...	762	664	+ 98
Chicken-pox ...	1548	(from April 14th to the end of the year).	

* Corrected so as to be comparable with the figures for 1902, which comprises 53 instead of 52 weeks.

The foregoing statements indicate that the city suffered very heavily last year from scarlet fever, and rather heavily from diphtheria. The prevalence and mortality of typhoid fever was considerably less than usual.

SMALL-POX.

During the five years 1897-1901 the city was practically ^{Small-pox.} free from small-pox, but this satisfactory condition of affairs was brought to an end last year by the occurrence of 69 cases of the disease. The latter is, of course, a very small number compared with the figures for certain previous years when widespread epidemics were experienced, as will be seen from the following table:—

	Small-pox Cases notified.	Deaths registered.
1872 ...	1977	299
1873 ...	794	122*
1874 ...	3791	637
1875 ...	824	173
1876 ...	11	0
1877 ...	50	8
1878 ...	27	5
1879 ...	4	0*
1880 ...	18	2
1881 ...	16	6
1882 ..	89	17
1883 ...	1202	110
1884 ...	471	64*
1885 ...	84	12
1886 ...	2	0
1887 ..	12	2
1888 ...	18	0
1889 ...	0	0
1890 ...	0	0*
1891 ...	47	7
†1892 ...	27†	0†
1893 ...	979	70
1894 ...	2074	171
1895 ...	100	8
1896 ..	14	4*
1897 ...	0	0
1898 ...	0	0
1899 ...	0	0
1900 ...	2	0
1901 ...	0	0
1902 ..	69	4*

*53 weeks. † City Extended.

In the early part of 1902 small-pox was widely prevalent in London, and had also broken out in many other

Small-pox
(continued).

places in different parts of the country. About the beginning of February it was introduced into Birmingham by a tramp who had been in the city only one week when he was taken ill at the Common Lodging House where he was staying. He attended at the General Hospital, where he was found to be suffering from small-pox, and was at once removed to the City Hospital. Fourteen days before his illness he was staying in Liverpool, and small-pox was prevalent in that city at the time.

As soon as the patient had been removed, the lodging-house where he stayed was thoroughly disinfected, and two of his companions were isolated at Bacchus Road Station for fear they might develop the disease. Dr. Robinson, the Public Vaccinator, attended at the lodging-house and offered to re-vaccinate all the inmates, but only nine were persuaded to undergo the operation.

The measures taken were happily successful in preventing any spread of the disease among the patient's companions. But, unfortunately, he must have infected another man who was attending the General Hospital at the time and became an in-patient there. While in the hospital he developed small-pox and was removed to the City Hospital. Those inmates of the ward he had been in who were in a fit state were re-vaccinated, and no further cases of small-pox occurred in connection with this outbreak.

For a month the city was free from any fresh cases, but on March 26th another tramp was found to have the disease, and on April 5th a man who had been in contact with a case at Portsmouth fell ill with it. Shortly afterwards two cases occurred at a common lodging-house, and then cases began to appear in various parts of the town, most of which could not be traced to any previous patient. A few weeks later, however, it was found that no less than six persons living in one house—in the neighbourhood where a large proportion of the cases occurred—had been treated as having chicken-pox, while really suffering from small-pox, and this unfortunate mistake may possibly account for many of the untraced cases.

An interesting instance of the way in which small-pox may spread from an unrecognised case occurred towards the end of May. About that time a man named C— O— was reported as suffering from chicken-pox, but on being visited by the Medical Superintendent of the City Hospital was found to be really ill with small-pox. Three weeks before, this man had been engaged in stripping the walls of a house in which a case of small-pox had occurred. C— O— was treated at home for over a week before the real nature of his complaint became known, and a number of subsequent cases were traced to him. The first was that of a woman who had spoken to him a fortnight before

she herself was taken ill. Then three cases occurred in the home of a youth named W—— R——, who had worked for C—— O——, the youth himself being one of them. Subsequently a woman living in the same terrace as C—— O—— was found to have contracted the disease, and lastly a case occurred at a house in which the youth W—— R—— had worked, making six cases directly traceable to this one source.

Every effort was made to check the outbreak, the principal measures adopted being the prompt removal of the patient to hospital, thorough disinfection of the infected house and vaccination or re-vaccination of all persons who were known to have been in contact with the patient, and who were willing to take this precaution. Unfortunately great difficulty has often been experienced in persuading persons who had been exposed to infection to protect themselves in this way, and a number of fresh cases have resulted. In spite, however, of difficulties of this kind, the disease was stamped out after sixty-four cases had occurred, and at the beginning of September not a single case remained in the town.

For a period of three months the city remained free from small-pox, but early in December the disease was once more introduced by a tramp who apparently became infected in Yorkshire. He was in Derbyshire on November 11th, and afterwards passed through Northallerton, Ripon, Knaresborough, Wetherby, Leeds, Wakefield, Sheffield, Chesterfield, Mansfield, Nottingham, Loughborough, Ashby-de-la-Zouch, Burton, Lichfield, and Erdington, sleeping on the journey at fifteen different workhouses. He was admitted to the Casual Ward at the Birmingham Workhouse, found to be suffering from small-pox, and removed to the City Hospital. He had, however, infected another inmate of the Casual Ward, who was removed a fortnight later. These cases were the beginning of the outbreak, which still continues in the town.

The experience of last year served to strengthen if possible my conviction that it is to vaccination and re-vaccination that we must look to stop the occurrence and progress of small-pox epidemics. I, therefore, drew up a large window bill, of which the following is a copy, and had the same publicly displayed in districts where the disease appeared :—

“ SMALL-POX.

“ There is reason to believe that the City is on the eve of another Small-pox epidemic.

“ It is therefore the duty of everyone to do what he can to mitigate or prevent it.

“ Small-pox is the one infectious disease against which effective protection is known.

Small-pox
(continued).

Small-pox hand
bills.

"This protection is given by Vaccination, which almost invariably prevents an attack of the disease for some years after it has been performed.

"In the last epidemic in Birmingham scarcely any persons who had been vaccinated within 10 years took the disease and not one of them died, but among the unvaccinated patients under 10 years about one in every three died, while among the unvaccinated babies who took Small-pox two out of every three died.

"It is most important therefore that every baby that is in good health should be vaccinated as early as possible after birth.

"It is also very important that all children should be revaccinated when they reach the age of ten.

"Adults who have not been vaccinated or revaccinated within 10 years should be vaccinated at once, as the protection given becomes less after a time.

"The vaccination of infants can be performed at home, either by your own doctor, or free of charge by the Public Vaccinator in whose district you live.

"Revaccination can be performed by your own doctor, or free of charge by the Public Vaccinator for your district at the address given below.

DISTRICT.	NAME.	ADDRESS.
Parish of Birmingham ..	Dr. Robinson ..	Parish Offices, Edmund Street. Monday, 4 to 8 p.m.; Saturday, 2 to 6 p.m.
Parish of Aston— Duddeston	Dr. Pooler ..	77 Great Brook Street. Every Week-day, from 9 to 10 a.m., 12 to 2 p.m., and 6 to 8 p.m.
Nechells and Saltley ...	Mr. Roberts ..	Congregational School-room, Saltley Road: Saturday, 3 to 4 p.m. 429 Bordesley Green: Wednesday, 3 to 4 p.m.
Deritend and Bordesley	Dr. Bygott ..	The Mission Hall, Camp Hill: Saturday, 3 to 4 p.m.
Parish of Edgbaston ...	Dr. Richards ..	Temple House, Bath Row, Edgbaston: Every Week-day, 6 to 7 p.m.
Parish of Harborne ...	Mr. Middleton ..	St. John's Schools, Harborne: Wednesday, 5 to 6 p.m.
Parish of Balsall Heath...	Mr. Wilkinson...	Lime Grove, Moseley Road: Monday, 6 to 7 p.m.

"N.B. — Any rash resembling Chicken-pox, unless it is in a young and well-vaccinated child, should be shown to a doctor for fear it should be Small-pox.

"May, 1902. "ALFRED HILL, M.D.,
"Medical Officer of Health."

At the present time a small handbill containing the same information is being distributed as widely as possible by the Assistant Inspectors and Health Visitors.

Small-pox and
vaccination.

One striking illustration of the beneficent influence of vaccination is afforded by the fact that last year the vaccinated patients were ill on an average for only five weeks, while among the unvaccinated the average length of illness was seven weeks.

I think it may be well to point out that it is only since vaccination has become more general that small-pox has taken the mild and not very fatal form in which we now

see it. Even as late as thirty years ago its ravages were sufficient to cause the greatest alarm. In London, for instance, in 1871 there were no less than 7,912 deaths from small-pox, whereas in the last fifteen years the highest annual number recorded has been only 1,314.

Similarly in Birmingham in 1874 there were 637 deaths from small-pox, while the highest number in any year since has been only 173. Moreover, the severity of the disease has also greatly diminished. Thus, in the ten years 1872-1881 there were 7,512 cases, and 1,252 deaths, so that one case in six proved fatal. But in the ten years 1892-1901 only 3,196 cases occurred, resulting in 253 deaths, or one death in twelve cases. And, inasmuch as the disease is still very malignant amongst unvaccinated patients, the reduced fatality, as well as the reduced prevalence, must be chiefly attributed to the spread of vaccination.

Yet, in spite of this, there are large numbers of people who are so unwise as to refuse to be vaccinated, even after being exposed to infection.

CHICKEN-POX.

It being well known that there is great difficulty in distinguishing between certain cases of small-pox modified by vaccination and those of chicken-pox, more especially in the early stages of the eruption, your Committee, in common with sanitary authorities in London and some other places, considered it desirable to take measures to obviate the serious consequences which may result from errors in the diagnosis of these two very similar eruptive diseases. You accordingly took steps to add chicken-pox to the list of notifiable diseases, the object being to arrange for some if not all of the cases to be seen by the Medical Superintendent of the City Hospital, so that if by any chance a modified case of small-pox had been mistaken for one of chicken-pox it might be promptly discovered and isolated. Notification came into force on April 14th, and from that date till the end of the year 1,548 cases were notified, the great majority being young children. Most of the patients who were over seven years old were visited by the Medical Superintendent, and a few cases notified as chicken-pox were found to be really small-pox. The arrangement, however, did not meet with the approval of the whole body of medical practitioners, and it is now understood that only in those cases in regard of which the medical attendant requests a second opinion is a visit to be made by the Superintendent of the hospital.

Notification of
Chicken-pox.

VACCINATION.

I have received from the Vaccination Officers returns relating to vaccination for the year ending June 30th, 1902.

Vaccination

From these it appears that 2,190 children died before vaccination could be performed, and 82·9 per cent. of the remainder had been successfully vaccinated at the time the returns were made.

"Conscientious objection" to vaccination was declared in seventy-nine instances only, but 9·2 per cent. of the surviving children have been lost sight of without being vaccinated, while 2·9 per cent. have not been vaccinated, but are being kept under notice by the Vaccination Officers. These figures show an improvement on those for the previous year, the percentage of successful vaccination having risen from 80·8 to 82·9, while the children lost sight of have decreased from 9·9 to 9·2 per cent., and those under notice but not yet vaccinated from 4·6 to 2·9 per cent.

MEASLES.

Measles.

The deaths from measles were fewer than usual, numbering 189 against an average of 249 in the five previous years.

Most of the deaths were, as usual, the result of the patient getting a chill and developing some respiratory trouble. Very few deaths occurred in better class houses, where good accommodation and proper nursing were available.

Measles is not a notifiable disease in Birmingham, but through the courtesy of the School Board I have been informed of the names and addresses of children who were away from school on account of the existence of measles at their homes, and to each of these addresses I sent a handbill relating to the disease. The same handbill is also used by the Health Visitors in the course of their work. The following is a copy of the bill:—

PRECAUTIONS AGAINST MEASLES.

Measles handbill.

Measles is a highly infectious disease and causes a very large number of deaths.

The first symptoms of the disease are coughing, sneezing, and running from the eyes and nose. Anyone having such signs of illness should be separated at once from the rest of the household.

A patient suffering from Measles should be kept for a month in a separate bedroom. No children should on any account be allowed to enter the sick room, and the person waiting on the patient should associate as little as possible with healthy children.

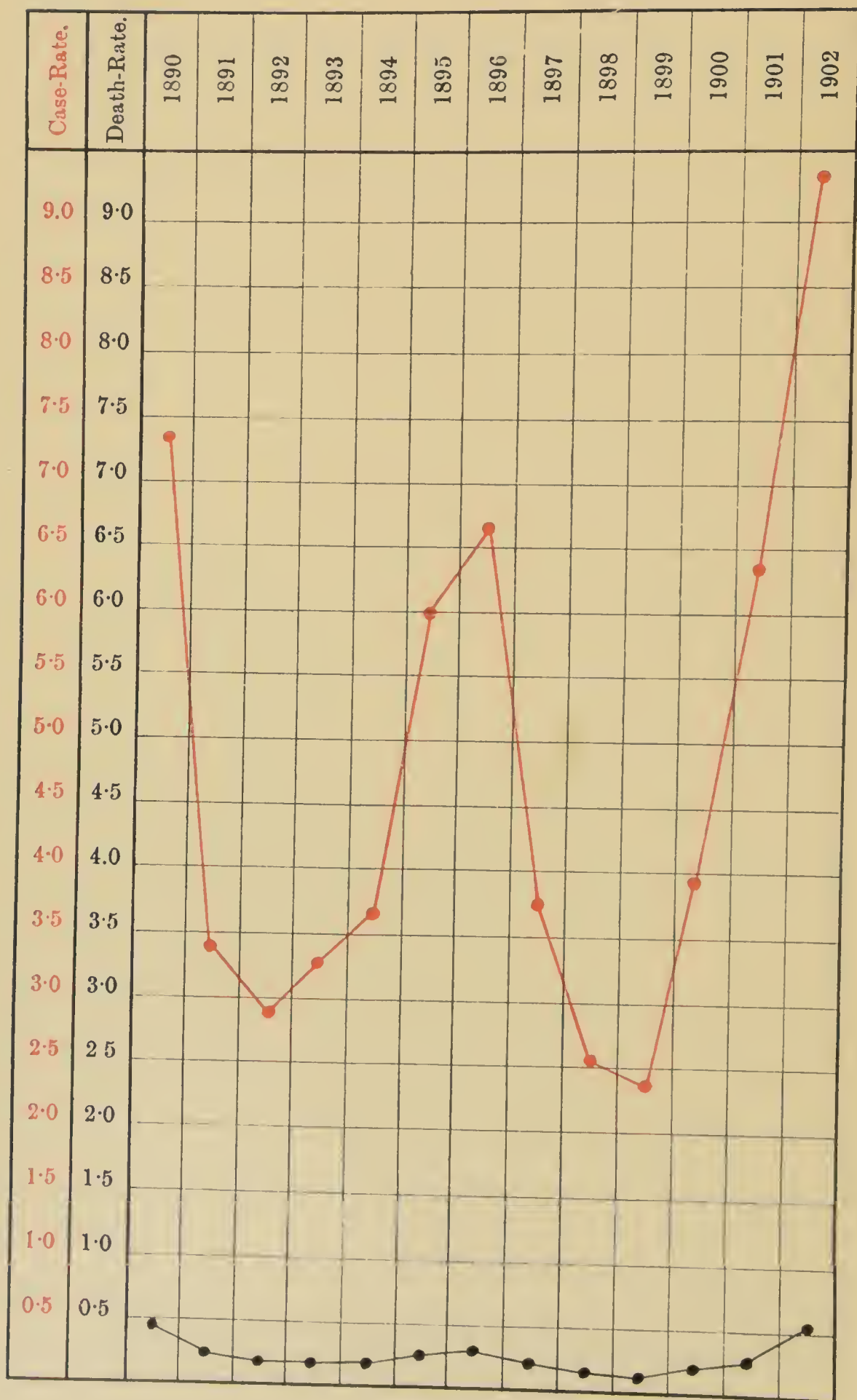
It is illegal to allow the patient to go into the street or into any public place.

No children from the house must be sent to school during the illness.

The patient's bedroom should be kept warm by having a fire burning in it, and well ventilated by having the window kept open. All carpets, curtains, and bed-hangings should be removed.

During the illness and for some time afterwards great care should be taken to prevent the patient from catching cold. Most of the deaths from Measles are caused by not keeping the patient sufficiently warm.

SCARLET FEVER.



After recovery the patient should be bathed with warm water and carbolic soap. All the clothing and bed linen used in the sick room should be boiled and washed.

The walls of the bedroom should be cleansed, and the floor well scrubbed. The window and door should then be left open for as long as possible.

ALFRED HILL, M.D.,
Medical Officer of Health.

The Council House, Birmingham.

SCARLET FEVER.

The number of cases of scarlet fever was far greater than in any other year since compulsory notification came into force in 1890. No less than 5,044 cases were notified, the next highest number being 3,389 in 1896. The number of cases notified and the rate per 1,000 of the population in the past 13 years are as follows :—

	Cases Notified.	Rate per 1000.
†1890	2995	7·31
†1891	1466	3·42
1892	1418	2·94
1893	1614	3·31
1894	1788	3·64
1895	2964	6·00
*1896	3389	6·65
1897	1929	3·81
1898	1320	2·60
1899	1255	2·44
1900	2063	3·98
1901	3314	6·35
*1902	5044	9·39

* 53 weeks. † Old City.

The scarlet fever case-rates in six other large towns are shown below :—

	Scarlet Fever Case-Rates per 1000.
London	3·9
Liverpool	8·3
Manchester	4·1
Birmingham	9·4
Leeds	4·4
Sheffield	3·8
Bristol	8·0

The prevalence of and mortality from scarlet fever during the last 13 years is indicated on the chart on the opposite page, which shows very clearly the marked manner in which the endemic of scarlet fever fluctuates, becoming widely epidemic every five or six years.

The deaths were not very numerous, considering the large number of cases. They amounted to 29·3 or 5·8 per cent. of the cases.

Scarlet Fever in
young children.

The fatality of the disease was much greater among the younger patients than among those of more advanced years. Sixty infants under one year old were attacked and 10 of them died, giving a case-mortality of 17 per cent. Among children between one and five years old the case-mortality was 13 per cent., while among patients over five years old only 2·5 per cent. of the cases proved fatal. It is therefore particularly advisable for parents and others to take special care to save all infants and young children from being exposed to infection, as the younger the patient the greater is the risk of a fatal termination, proving the fallacy of the popular notion that it is best to have the disease as early as possible and "get it over."

Scarlet Fever in
Wards.

With an epidemic of such dimensions, it is natural that every ward of the city should have been affected. The degree of prevalence, however, varied greatly in different wards, as will be seen from the following figures:—

	Scarlet Fever Case- Rates per 1000.
Deritend	14·1
Rotton Park	13·7
St. Thomas'	12·0
Ladywood	11·2
Bordesley	10·4
All Saints'	9·1
Balsall Heath	8·9
Saltley ...	8·8
Duddeston	8·7
St. Martin's	8·3
St. Bartholomew's	8·0
Edgbaston and Harborne	7·7
Nechells	7·4
St. Mary's	7·4
Market Hall	6·5
St. Paul's	6·4
St. George's	4·6
St. Stephen's	4·0

These figures are similar to those obtained on other occasions, and strengthen the view that scarlet fever obtains no more hold on the unhealthy than on the healthy districts. The majority of the less healthy wards are indeed superior to the others in respect of the prevalence of the disease.

Precautions
against Scarlet
Fever.

In consequence of the severity of the epidemic your Committee requested me to report upon the conditions under which cases were admitted to and discharged from the City Hospital, and the disinfection of premises from which cases have been removed. I accordingly visited both the Lodge Road and Yardley Road Hospitals, and conferred with Dr. Chatelier and Dr. Beazeley as to the arrangements for admitting and discharging patients. I also instructed

Chief Assistant Inspector Thompson to prepare for me a detailed report showing the steps taken to ensure proper disinfection of the patients' homes, and subsequently placed the following information before you.

Precautions
against Scarlet
Fever (con-
tinued)

All cases of scarlet fever, notified to me for removal, are at once telephoned to the City Hospital. Cases are also sometimes telephoned direct to the hospital from various medical institutions in the town, and by general practitioners. All these are entered on a special sheet, and the patients are fetched in as speedily as possible. Two ambulances are generally in daily use for the removals, but during one period of last year three had to be employed. The ambulances start at 10.0 a.m. and are working till nine, ten, or eleven o'clock, and even later at night. A special nurse is attached to each ambulance, and a separate lot of blankets is taken in the ambulance for each case, and all patients are brought dressed just as they are found in either their day or night clothes. On arrival at the hospital each case is seen in the ambulance by the medical officer on duty, and if he is satisfied that it is one of scarlet fever it is then admitted into the ward, having first been given a hot bath.

The patient's clothes are carefully noted, and each article entered in the "Clothing Book." The clothes are then tied up in a bundle for disinfection by steam. Boots and all leather articles, braces, hats, feathers, furs, etc., which would be spoilt by steam, are tied up in a separate bundle for fumigation only. The bundles are collected daily, and are taken to the Disinfection Station at Bacchus Road, where those to be disinfected by steam are put into the steam disinfector, and those for fumigation only are exposed in a chamber to the fumes of sulphur dioxide. The articles are afterwards fetched by the patients' friends from the disinfecting station.

Twice a week all the patients who have been in the hospital six weeks or more are kept in bed, and got ready for examination as to their fitness to be discharged. Each one is carefully examined, attention being paid to the condition of the hands, feet, throat, ears, nose, etc. If desquamation is completed, and the patient is free from any discharge or sores, and if the general health is so good that the Medical Superintendent considers the case fit to be discharged, a notice to that effect is sent to the friends, two clear days being given so that the patient's clothes, etc., may be got ready. The patients who are thus "passed" are given a bath and examined again carefully on each succeeding day prior to their discharge, and if any complication occurs which, in the opinion of the Medical Superintendent, renders the case unfit for discharge, notice of this fact is at once sent to the friends.

Precautions
against Scarlet
Fever (con-
tinued).

The "Discharging Block" is so constructed that there is a male and female side for bathing the patients. The patients enter a waiting room, and from there in their turn they go into the next room where they undress and leave the clothes which they had worn in the hospital. They are then taken into the bath room and given a final warm bath, to which some Izal is added, the body is also washed all over with carbolic soap. They are then covered with a blanket and taken into the dressing room, where they are dressed in the clothes brought for them from their homes and handed in by the "egress" door of the front waiting room. After being dressed they go into the front waiting room, and are once more examined by the Medical Officer on duty, and after partaking of warm milk and biscuits they are allowed to leave. The nurses who do the bathing of these patients put on a clean dress, cap, apron, etc., and also brush their hair with an antiseptic hair-wash before they begin to bath them.

The letters written by the patients, and sealed up by them, were formerly disinfected by exposure to sulphur dioxide. This method was not found efficient, and they were then, and until quite recently, sent to the disinfecting station and put into the steam disinfector in the same way as the bedding, etc. Even this, however, was not considered satisfactory, so the following method has been adopted:—The letters written by the patients are all left open and the addresses are written on the head of the letter, as well as on the envelope. They are collected, the letters are then taken out of the envelopes, and both the letters and envelopes are hung on a piece of steel wire, put into a special apparatus, and exposed all night to the fumes of formalin generated by a formalin lamp. They are taken out in the morning, and sealed up by a person who has no connection with the hospital wards whatever, and are then posted. I consider that this process of disinfection of letters is as simple and efficient as any other, and I see no advantage to be gained by altering it.

The number of "return" cases—comprising those in which one or more cases have occurred in a house within four weeks of the return home of the original case—have been as follows:—

1900	...	...	...	...	1.6 per cent.
1901	...	...	...	...	2.6 "
1902 up to June 16th	...	...	...	...	2.6 "

calculated on the total number of discharges from the two hospitals. The term of one month is of course an arbitrary one assumed as reasonable. Many of these so-called "return" cases are not "return" cases in the proper sense of the word, that is to say many of them are caused by infec-

tion quite independent of the primary cases sent home, though it is impossible always to distinguish between the two classes. The opportunities for such independent infection are exceedingly numerous. The undeclared retention at home of infected clothing, the playing together of children and close association in other ways at home, at school, and elsewhere, the use of one another's clothes, books, slates, toys, and other modes of contact are continual sources of danger, especially in very mild forms of the disease, so mild as to be unrecognised. They are all favourable to the spread of the disease to other members of the family, especially where cases have entirely escaped recognition.

Precautions
against Scarlet
Fever (con-
tinued).

Making allowance for these cases of independent infection, the actual number of genuine "return" cases is, no doubt, very small, and such cases do and will occur to some extent, whatever precautions may be taken. The condition of the nose, throat, and ear is apparently the determining factor in "return" cases. Such of these as actually occur might probably be diminished by the isolation of obstinate cases of Rhinitis and Otitis for say a fortnight in a convalescent establishment away from the hospital, instead of their being discharged directly from the sick wards, or by their isolation after return home, which, however, is frequently impossible.

In cold weather, too, it would be a safeguard against taking cold, which no doubt is a frequent cause of a return of the nose and ear discharges, if the warm bath were given the day before instead of on the day of discharge, and the patient then kept in a non-infected place; also, that where the clothing is insufficient, additional clothing be lent for use during the journey home, and that where necessary a close vehicle be used for such removal. Patients on discharge are in a more than usually sensitive condition owing to their general state of health, and the local susceptibility of their skin, and of the mucous membranes of the ears, nose and throat; consequently any exposure to cold and wet should be carefully avoided.

Experience shows that "return" cases have little if any connection with the period of detention in hospital, so that long detention there does not guarantee against infectivity. Probably one of the most important safeguards against "return" cases is the assignment to each patient in hospital of a very liberal amount of cubic space. It has been repeatedly insisted on that this amount should not be less than 2,000 cubic feet per case, whereas I am informed that certain wards afforded last year a space much less than this.

Such a limitation of space has the effect of making the wards much less pure and more infective, it lowers the

health of the patients, and gives rise, consequently, as experience has always shown, to slower recovery, a more severe type of the disease, and complications of various kinds, more or less dangerous, such as skin sores, follicular tonsillitis, and abscesses, and including various manifestations of a very grave character embraced under the generic term pyæmia. These considerations point to the importance, not only of perfect cleanliness and free ventilation, which are, of course, always necessary and are without doubt practised in the City Hospitals, but also of a liberal allowance of cubic space. It is a matter of general observation that the same hospital which at first provided the necessary space, and produced favourable results, gradually shows deterioration in the later cases after being made to receive an increased number of patients. The City Hospitals have proved no exception to this rule.

As soon as possible after a case of scarlet fever has been notified, the Assistant Inspector visits the house and obtains particulars as to the condition of the house, number of inmates, and names of children attending school. If the patient has been removed he leaves a notice on which he sets down the various articles required to be removed to the Disinfecting Station.

On his return to the office he enters particulars of the case in a large record book for my information, giving among other details the names of children attending school which my clerk forwards to the head teachers, with a request that they be prohibited from attending school for a time. The address of the patient is also entered on a book for the guidance of the disinfecter, who goes to the address and sprays the walls and ceilings of the infected portions of the house with a solution of chloride of lime. The articles enumerated on the sheet left by the inspector are removed in a van kept specially for the removal of infected articles and taken to the Disinfecting Station, where they are passed through the disinfecting machine. They are then taken back to the house in another van kept specially for disinfected bedding, clothing, etc.

It is highly desirable that every article liable to infection should be submitted for disinfection, but it is very difficult, if not impossible, to insure this being done, owing to disinclination on the part of the people to state the whole truth or to let all suspected articles be taken away for the purpose.

The Assistant Inspector is required to enter particulars of the rooms requiring to be disinfected on a sheet which is laid before me each morning for my approval. The inspector then enters in his report book the particulars of

the work required to be done at each house from which a patient has been removed, with the name and address of the owner, agent, or occupier who is responsible for the stripping and limewashing of the walls and ceilings, and notice is served upon this person to do the necessary work. The inspector afterwards calls at the house to see if the work has been thoroughly carried out, and if not done the work is undertaken by your Committee, and the cost charged to the owner. In cases which are not removed to hospital similar procedure is adopted as soon as the Medical Attendant certifies that the patient is free from infection.

Precautions
against Scarlet
Fever (con-
tinued).

There can be no doubt that scarlet fever is very largely, perhaps mainly, spread by unrecognized cases, which are either overlooked altogether, or are diagnosed as scarlet fever in the later stages of the illness, when the infection has already had ample opportunity of spreading. I am constantly receiving certificates of cases which are in the desquamative stage when notified, and in many instances there is little doubt that the patients, who are children attending school, have communicated the disease to a number of their school fellows.

The extensive epidemic of scarlet fever, and the large proportion of cases who wished to be removed, proved a severe tax upon the resources of the City Hospital, and in July it was found necessary to erect another temporary pavilion, together with a block of nurses' bedrooms, at Little Bromwich. During the Registration year no less than 4,534 cases were admitted to the hospital, and on August 5th, when the culminating point was reached, there were 862 patients under treatment.

DIPHThERIA.

In my last Annual Report I commented on the satisfactory nature of the figures relating to diphtheria, the disease having fallen to a lower level than in any other very recent year. I am sorry to say that during the past year a great increase took place, the cases rising from 533 to 787, and the deaths from 85 to 130.

Diphtheria.

My enquiries into the circumstances under which the diphtheria cases occurred revealed the fact that many of them were associated with the presence of scarlet fever infection, and seemed to suggest that some rather intimate connection exists between the two diseases. In a considerable number of cases the same patient suffered from both complaints concurrently, in some the attack of diphtheria supervened on one of scarlet fever, while in others one

member of a household suffered from diphtheria shortly after someone else in the same house had been seized with scarlet fever.

In 1896 a "crest" occurred in the prevalence-wave of scarlet fever, and a great increase took place in the number of diphtheria cases. Last year, which was also marked by a "crest" of scarlet fever, a similar increase in diphtheria occurred, and it seems probable in both instances that the increase in diphtheria cases was connected in some way with the extensive prevalence of scarlet fever.

Diphtheria in
Wards.

I have not been able to discover that insanitary conditions had any marked influence in spreading the disease. Some of the most healthy wards in fact suffered from diphtheria, as they also did from scarlet fever, much more heavily than the generally unhealthy ones, as is indicated by the following figures:—

					Diphtheria Case-rates per 1000.
Ladywood ...	...	...	...	...	2.94
Rotton Park ...	...	...	...	...	2.49
St. Paul's ...	...	...	...	...	2.40
St. Martin's ...	...	...	...	...	1.79
All Saints' ...	...	...	...	...	1.71
Nechells ...	...	...	...	...	1.44
St. Thomas' ...	...	...	...	...	1.42
Duddeston ...	...	...	...	...	1.36
Deritend ...	...	...	...	...	1.32
Edgbaston and Harborne ...	...	...	...	...	1.23
St. Mary's ...	...	...	...	...	1.23
Balsall Heath ...	...	...	...	...	1.13
Saltley ...	...	...	...	...	1.11
St. Bartholomew's ...	...	...	...	...	1.05
Bordesley ...	...	...	...	...	1.04
Market Hall ...	...	...	...	...	0.92
St. Stephen's ...	...	...	...	...	0.87
St. George's ...	...	...	...	...	0.72

The three most unhealthy wards in the town are St. Mary's, St. Stephen's, and St. Bartholomew's, all of which had fairly low diphtheria rates. The three most healthy wards—Edgbaston and Harborne, Bordesley, and Balsall Heath—although not amongst the worst wards in regard to diphtheria cases, certainly did not occupy so good a position as their general healthiness would lead one to expect.

Diphtheria and
Anti-toxin.

Fortunately the fatality of diphtheria has continued to be rather low, the deaths last year being equal to 17 per cent. of the cases. I have pointed out before that the case mortality from diphtheria decreased in a marked manner immediately the gratuitous distribution of anti-toxic serum was commenced in June, 1897. The decrease is plainly seen from the following statement:—

							Case-mortality per cent.	Diphtheria and Anti-toxin (con- tinued).
1892	19	Average 23.
1893	...	...	...	...	...	...	21
1894	...	...	...	...	...	...	22
1895	...	...	...	...	...	...	29
1896	...	...	...	...	...	...	25
1897, January to June	...	...	...	...	...	...	25
1897, July to December	...	...	...	...	...	...	20
1898	...	...	...	...	...	...	19
1899	...	...	...	...	...	...	20
1900	14	Average 17.
1901	...	...	...	...	...	...	16
1902	...	...	...	...	...	...	17

Last year 510 doses of anti-toxin were issued from the University on behalf of your Committee, two doses as a rule being sent for one patient. Four hundred and seventy-five bacteriological examinations were also made with the object of assisting medical practitioners in making a correct diagnosis in apparent cases of diphtheria.

I have endeavoured as far as possible to determine the effect of the anti-toxin used on the mortality from diphtheria and find that it has been decidedly beneficial. Unfortunately my information on this point is meagre, and it is, therefore, difficult to prepare completely reliable statistics regarding it. I do not know, for instance, whether the anti-toxin issued was used early in the illness—a most important point, inasmuch as its efficacy depends largely on its early use—neither do I know the actual character of the individual cases, whether mild or severe, nor the nature of the home surroundings and the facilities for proper nursing. But in spite of these deficiencies of information, there is strong evidence that the use of anti-toxin has been of very considerable advantage.

By looking through my records I have ascertained that anti-toxin was issued on behalf of 184 patients who were notified to me as suffering from diphtheria, and that 28 of them succumbed to the disease, giving a mortality of 15 per cent. At first sight, therefore, it would seem that 15 per cent. of the patients treated with anti-toxin died. But on looking more closely into the records I find that four of the twenty-eight deaths occurred either before or on the same day as the anti-toxin was despatched for their use, and six others occurred the next day after the anti-toxin was sent out. In these ten cases, therefore, the serum was either not used at all or was used too late to be of any practical value.

It appears, therefore, that 174 patients received anti-toxin early enough to derive some benefit from it, and eighteen of these died, giving a mortality of only 10 per cent., a very satisfactory figure for diphtheria cases. In contrast with this the mortality amongst patients for whom

anti-toxin, so far as I know, was not used, was 18 per cent. The use of anti-toxin, therefore, appears to have lowered the mortality by about half.

Less than one-fourth of the cases reported last year appear to have employed anti-toxin, but even so limited a use of the serum has been attended by marked benefit, and it is very desirable that its employment should be greatly extended. It is most important also that it should be given directly the medical attendant sees suspicious signs of diphtheria, and without waiting for the result of a bacteriological examination. In order to do something to bring about these two *desiderata*, I am at the present time sending to all medical men in the town fresh forms for making application for anti-toxin, together with a circular, of which the following is a copy:—

Health Department,
The Council House,
Birmingham.

Dear Sir,

DIPHTHERIA

I beg to remind you that the Health Committee have arranged with the Council of the University for the bacteriological examination at the University of membrane or secretion taken from the throats of patients who have symptoms of Diphtheria. The necessary swabs and tubes for the taking and despatch of the material to be examined may be obtained free of charge at the University. The Committee have also arranged for the supply of anti-toxin serum, which, if used at an early stage, has proved a most valuable remedy for Diphtheria. This also may be obtained from the University, free of charge, together with the loan of a syringe for its injection.

The syringes are supplied clean and in an aseptic state, but the needle should be sterilised again before use.

This arrangement relates only to Diphtheria patients residing within the City boundary.

I enclose a supply of revised forms to be used in forwarding samples or applying for anti-toxin serum, and shall be glad if you will use them in place of the old forms, which should be destroyed.

I remain,

Yours faithfully,

ALFRED HILL, M.D.,
Medical Officer of Health.

Need of hospital
accommodation
for Diphtheria.

I have in several of my Annual Reports pointed out the need of public hospital accommodation for diphtheria cases, and am glad to know that your Committee intend, as soon as possible, to provide such accommodation at the Little Bromwich Hospital. It is partly for this purpose that the permanent enlargement of the hospital is now being carried out.

WHOOPIING COUGH.

Whooping
Cough.

Whooping Cough had 269 deaths set down to it, being twenty-nine more than the average number in the five previous years. The deaths from whooping cough numbered twice as many as those from diphtheria, although the

former disease is very lightly regarded, while the latter is much dreaded. If only the patients could be kept from catching cold, very few of the cases would terminate fatally.

TYPHOID FEVER.

The figures relating to typhoid fever are satisfactory, the cases and deaths being fewer than in any year since 1897. The actual number of cases was 544, and of deaths 100. Typhoid Fever.

During the fourth quarter of the year 1899 and the whole of the year 1900 the cases of typhoid fever were very numerous, and in order to combat more effectively the spread of the disease your Committee, on March 18th, 1901, opened two pavilions at Little Bromwich Hospital for typhoid fever cases. The opening of these pavilions had the desired effect, an immediate and substantial diminution resulting in the number of cases.

The typhoid fever wards remained open until June 2nd, when it was reluctantly decided to discontinue admitting cases of this disease, in order that the two pavilions might be used for scarlet fever patients. Arrangements were made for a number of beds at the general hospitals to be set apart for typhoid fever patients who needed removal in the interests of public health, and your Committee provided an additional ambulance for conveying them to hospital. In this way a good many patients who needed to be removed were successfully dealt with, but owing to the limited accommodation, considerable delay occurred in the removal of patients, and a not inconsiderable number could not be received into hospital, although they wished to be. Typhoid Fever
wards closed.

I am strongly of opinion that the removal from their homes of typhoid fever patients is in many instances absolutely necessary if the disease is to be successfully combated, and I shall be very glad when the extension of the Little Bromwich Hospital makes it possible to again admit cases of this disease for treatment there.

The arrangement made by your Committee for Widal's Test to be applied at the University in cases where the medical attendant desires it, is still in force, and last year 208 such tests were made. Widal's test for
Typhoid Fever.

DIARRHŒA.

After a long series of unusually hot summers, which were productive of a very high mortality from diarrhœa, Birmingham last year experienced one of the coolest summers on record, and the result was that an exceptionally small Diarrhœa.

mortality from diarrhœa was recorded. Throughout the five previous years it was my unpleasant duty to call your attention to the abnormally high diarrhœal mortality. Special measures were inaugurated to reduce the loss of life from this cause, but the meteorological conditions were so favourable to the spread of the disease as to largely counteract the efforts put forth. It was possible, however, to show that the special measures adopted were to some extent limiting the ravages of the disease even during the very hot weather, and the advent in 1902 of a really cool summer has been accompanied by a very low diarrhœal mortality.

The deaths from diarrhœa, including those from enteritis, which is often used as a synonym for diarrhœa, are shown in the subjoined statement :

						Deaths from Diarrhœa and Enteritis.
1891	...	...	...	...	...	453
1892	..	...	...	...	...	547
1893	...	..	..	...	...	1028
1894	...	...	...	...	...	404
1895	...	...	...	...	...	887
1896	...	...	...	...	...	898
1897	...	...	...	...	...	1444
1898	...	...	...	...	...	1212
1899	...	...	...	...	...	1411
1900	...	...	...	...	...	1022
1901	...	...	...	...	...	998
1902	...	...	...	...	..	534

Thus the mortality from diarrhœa last year was, with one exception, the lowest since 1891.

Effect of cleanliness on
Diarrhœa.

This lower mortality must undoubtedly be attributed primarily to the cool weather, but I am convinced that the greater cleanliness now enforced in the town has had a considerable share in the reduction. The work of the Health Visitors, which is principally concerned with domestic cleanliness and ventilation, the more rapid removal of ashpit and pan privies at the instance of the Inspectors, the systematic cleansing of privies, ashplaces, drain traps, and surface gutters by the Cleansing Staff, are all measures recently adopted to ensure greater cleanliness in and around the dwellings of the poor, and it is only by such measures that the mortality from diarrhœa will be effectually reduced. Everything that conduces to greater cleanliness, both personal, domestic, and public, is calculated to reduce the prevalence of diarrhœa, and there can be no question that a great advance has been made in recent years in this direction of cleanliness, although so very much still remains to be done.

Diarrhœa and
confined
dwellings

One of the further improvements which, in my judgment, still calls most urgently for attention, is the provision

of more light and air in and around the houses of the labouring classes. Small, badly ventilated, back-to-back houses, with little open space in front of them, with most inadequate and unsuitable pantry accommodation, situated in close proximity to dirty and ill-smelling privies, are most favourable places for outbreaks of diarrhœa, and it is in such dwellings and not in better-class houses that the disease finds the bulk of its victims. The mortality from diarrhœa, and from many other diseases, too, will not, I think, be effectually dealt with until the homes of the poorer classes are structurally improved and properly opened up to the influence of light and air.

CONSUMPTION OR PHTHISIS.

The deaths from consumption (tuberculosis of the lungs) amounted to 874, and those from other forms of tuberculosis to 219, making a total of 1,093 from tubercular diseases.

Consumption.

The deaths from consumption were equal to a rate of 1·63 per 1,000 of the population, and amounted to nine per cent. of the deaths from all causes. As the topographical incidence of preventable diseases is a question of great importance as well as interest, I show in the following statement the mortality from phthisis in the respective wards:—

Consumption in Wards.

Wards.	Death-rates from Consumption.
St. Stephen's	2·78
St. Paul's	2·65
St. Bartholomew's	2·36
St. Martin's	2·24
St. Mary's	2·21
Deritend	2·12
St. George's	1·97
Duddeston	1·94
Ladywood	1·68
Market Hall	1·64
Nechells	1·50
St. Thomas'	1·48
Balsall Heath	1·31
All Saints'	1·29
Saltley	1·27
Bordesley	1·08
Edgbaston and Harborne	1·04
Rotton Park	·91

These death-rates again show what I pointed out in my last Annual Report, viz., that consumption is principally a disease of the less sanitary portions of the city, where both the hygienic and social conditions are of an inferior character.

Considerable attention was paid during the year to the means to be taken for the prevention of consumption, and as a result additional measures have been inaugurated in several directions. At the beginning of the year I invited

Prevention of Consumption.

the authorities of the various medical charities to assist your Committee by distributing to suitable patients the leaflet issued by me with regard to the prevention of consumption, and this request was cordially complied with. A little later I obtained information as to the procedure adopted in regard to consumption in certain large towns, and made the following report thereon :—

“ In Liverpool voluntary notification of consumption has been adopted, the same fees being paid as under the Infections Disease (Notification) Act. The houses of consumptive patients are visited by the staff of the Health Department, and such measures as disinfection, etc., are carried out free of charge. A card giving information concerning consumption is widely distributed, and a poster asking people not to spit on the footpaths is exhibited in public places.

“ The parochial authorities have established a sanatorium for the consumptive poor. There is also one connected with the Liverpool Consumptive Hospital, to which patients are admitted at a very reasonable charge.

“ In Manchester, in 1899, voluntary notification of phthisis was invited from public institutions only, but has since been extended to all cases. An Assistant Medical Officer of Health was appointed to visit the houses implicated, enquire as to the origin of the case, examine the condition of the premises, and give directions for such preventive measures as seem necessary. These preventive measures are afterwards supervised by the Sanitary Inspectors and Health Visitors. They include the disinfection of the walls, either by the application of chloride of lime solution or by rubbing with dough, and monthly visits as far as practicable to the household to see that the personal precautions recommended are being carried out.

“ The Consumptive Hospital at Bowden, maintained by voluntary contributions, receives cases in the earlier stages of the disease. Owing to pressure of applications cases have only been kept there for three months, and most of them were not completely cured when discharged. They had, however, been well drilled in preventive measures, and thus rendered able to look after their own health at home.

“ A small home has also been provided by Mr. W. J. Crossley for persons in the last stage of consumption who are removed there with the expectation that they will die. One of the difficulties experienced at this home, however, is that many of the cases, instead of dying forthwith commence to improve.

“ More recently the temporary hospital at Clayton has been used by the Corporation for the reception of a few cases of advanced phthisis, and the improvement in the individual cases has been marked.

Prevention of
Consumption
(continued).

“ Arrangements are in force for the examination of sputum in suspected cases of phthisis.

“ Printed handbills are distributed relating to the precautions to be taken by consumptive patients and their friends, and notices are supplied to workshops, public-houses and common lodging houses relating to spitting in such places.

“ In Leeds voluntary notification has been adopted, and the same fees are paid as under the Infectious Disease (Notification) Act. Every house in which a case of phthisis is reported is inspected in the ordinary way. The Inspector leaves a handbill on the prevention of consumption, and intimates that the Health Department will be glad to disinfect the rooms and clothing.

“ Bacteriological examinations are made free of charge, and sterilized bottles supplied for the transmission of sputum.

“ A small sanatorium has been established by a voluntary association at which open-air treatment is carried out. Last year the Corporation subscribed £400 to this institution, and it is probable that amount will be increased this year.

“ In Bristol notification of phthisis has not yet been adopted, although recommended by the Medical Officer of Health. Gratuitous disinfection of houses and clothing has been offered to the public, but has not been at all frequently accepted.

“ Handbills have been issued from time to time on the prevention of consumption.

“ At present no sanatorium has been provided, but the three counties of Somerset, Gloucester and Wilts are now combining to establish one.

“ In Glasgow voluntary notification of cases coming under treatment at hospitals and similar institutions has been in force for about 18 months, but up to the present time the Medical Officer of Health has not been able to make much use of the information thus given, though he hopes to do so in the future.

" Pamphlets and leaflets have been distributed from house to house, and by means of various medical institutions, religious organisations, etc.

" No steps have been taken by the Corporation to erect a sanatorium, but representatives of the Health Committee form part of a local Committee which is now looking out for a site for a sanatorium. This, when erected, will be supported by voluntary contributions. The parochial authorities are also contemplating the treatment of a large number of consumptive patients who are not paupers."

As a large number of consumptive patients in the poorer parts of the town—the parts in which consumption is most prevalent, and in which the proper precautions are least likely to be taken—are discovered by the Health Visitors in the course of their systematic visiting, your Committee did not think it necessary at present to introduce a system of notification by medical men, more especially as such a course did not seem likely to be of much use unless adequate means could afterwards be taken for dealing with the cases notified, involving regular inspection and disinfection of all the houses, and the removal of a large proportion of the patients from their homes to specially constructed sanatoria. A register is, however, now being kept of all the cases which come to my knowledge, and I have given instructions to the Health Visitors to call once a month at each of the houses on the register to see that cleanliness, ventilation, destruction of the sputa, and other precautions are carried out.

Up to the present time 126 houses in which there are 140 patients have been put on the register and are being visited month by month, while fresh houses are being added to the list every day. In several instances there are three, and in a number of others two patients living in the same house. Of the 140 patients, 45 are under twenty years of age, and 95 are over 20, and a very considerable proportion are too ill to follow their employment. At almost all the houses it has been found necessary to urge the people to take more precautions against the spread of the disease. Only 34 patients out of 140 had beds to themselves; in a number of instances husband and wife, one of whom was consumptive, as well as one or two children, were occupying the same bed. Unfortunately in many cases this can hardly be avoided, as the people are too poor to provide the patient with a separate bed, and for the same reason it is impossible for them to live in suitable homes where fresh air and sunlight, which are so essential for the cure of consumption, can be obtained. Most of the patients are willing and even anxious to take what precautions they can both for their own benefit and for the safety of their relatives, but the

means at their disposal are very limited. Indeed, so long as consumptive patients occupy the class of property in which many of the cases are now located—property in which the rooms are small, badly ventilated and deficient in light—and so long as the patients are too poor to have a liberal diet and a moderately easy life, it seems almost hopeless to expect to materially reduce the prevalence and fatality of the disease. It is, in my opinion, of the first importance in the crusade against consumption that the homes of the people should be made thoroughly healthy, in fact that every house should be in a sense a domestic sanatorium. A common defect in the houses of the poor, and one that renders purity of the air still more difficult to obtain, is the bad construction of the windows. A certain number of them have never been made to open at all, very many of those that are made to open can only be opened at the bottom, causing a draught, and in a great number of instances there are no sash cords, so that the window can only be kept open by propping up the sash, a most unsafe proceeding if there are children in the house. Knowing as we do the enormous value of good ventilation, it is surely not unreasonable to ask that all windows in old as well as new houses shall admit of being readily opened.

Prevention of
Consumption
continued).

What I have said with regard to the necessity for more air space as a preventive of diarrhoea applies with even greater force to consumption, which is particularly amenable to the influence of sunlight and fresh air. Every possible effort should, therefore, be made to open up congested districts, and to let in light and air; also to reconstruct back-to-back houses so as to obtain through and efficient ventilation, which is impossible in such houses. The erection of healthy dwellings is much more calculated to diminish consumption than the provision of a few sanatoria.

It is generally believed that consumption is spread very largely through the sputa of consumptive patients, and, on this account, indiscriminate spitting, especially in vehicles or buildings, needs to be discouraged. Last year I wrote to all the Tramway and Omnibus Companies in the city asking them to have notices displayed in their vehicles urging passengers to abstain from spitting while in or on the cars, which they all agreed to do. I also addressed a similar request to the three railway companies by which Birmingham is served, who promised to give the matter their serious consideration. Large printed notices respecting spitting have also been prepared and issued to factories and workshops and similar places, and enamel plates are being procured for use in the streets urging people not to spit on the footpaths.

Handbills setting out the precautions to be taken against consumption are left at all houses where cases are

discovered, and after a death from the disease the room used by the patient is, with the consent of the occupier of the house, disinfected with chlorine solution.

DISINFECTION.

Disinfection.

The disinfection of rooms has been effected by spraying the walls and ceilings with a solution of chloride of lime, and where necessary having the walls afterwards stripped and limewashed. The number of houses disinfected in this way was as follows :—

Houses disinfected after	Small-pox	...	..	67
"	"	"	Scarlet Fever	... .. 4355
"	"	"	Diphtheria	... .. 527
"	"	"	Typhoid Fever...	... .. 486
"	"	"	Puerperal Fever	... .. 29
"	"	"	Measles	... .. 67
"	"	"	Consumption	... .. 490

Infected articles of bedding, clothing, etc., are disinfected if possible by steam: where steam cannot be used without spoiling the goods hot air is employed. The number of articles disinfected last year was as follows :—

Beds and Mattresses	...	...	...	...	6533
Sheets, Blankets, and Counterpanes	..	...			15884
Pillows and Bolsters	...	...	...	...	11215
Garments	...	...	...	...	23685
Carpets	...	...	...	...	1127
Other Articles	...	...	...	...	3238

STAFF OF THE HEALTH DEPARTMENT.

Staff of Health Department.

In my Report for the year 1897 I pointed out to your Committee that the staff of the Health Department is not so large as in many other great towns. During the past year, owing to the extensive epidemic of scarlet fever, the pressure of work has been very great, and systematic house inspection, to which I attach great value, has necessarily been of a very limited character. I should be glad to see an increase made in the number of Inspectors, and I think that some re-arrangement of their duties might advantageously be effected, more particularly with the object of relieving the Inspectors of some part of the work now allotted to them, so that they might devote more time to the detection of nuisances. At present some of the Inspectors must have from 30,000 to 40,000 persons living in their districts, and with such a population it is scarcely possible to attend to all infectious cases, investigate complaints as to nuisances, supervise work in progress, and keep sufficiently in touch with the whole of the district by systematic inspection.

The need for systematic inspection even in better-class neighbourhoods is revealed by the following example :—

On October 24th a case of typhoid fever occurred in a large house in Edgbaston which, on examination, proved to be in a very insanitary condition. The closet in the house was of the old-fashioned "pan-container" form, and the soil pipe from it ran through the butler's pantry and was insufficiently ventilated by a 2½ in. pipe. The two lavatory waste pipes and the overflow pipes from the two water closet cisterns were neither disconnected nor trapped.

In the cellar there was a gully trap, and in the yard a "bell" trap, from which the bell was missing, and a defective "D" trap. There was also an uncovered ashpit in the yard, and the main drain was not syphoned nor ventilated. Steps were at once taken to have these defects remedied.

WOMEN HEALTH VISITORS.

During the year the staff of Health Visitors was increased from eight to twelve. The city is now divided for the purposes of their work into twelve districts, each of which contains about 3,000 houses of three rooms each. The visiting of these small houses constitutes the principal part of the Health Visitors' work, and the conditions discovered in them afford ample evidence of the need of such visiting.

Women health
visitors.

Last year the Health Visitors paid 31,977 primary visits, and 10,131 re-visits. At 8,788 houses there was illness of some kind, and the visitors gave advice as to nursing, diet, etc. Very many of the houses needed cleansing and ventilating, at a good number the sleeping arrangements were not satisfactory and had to be altered, and in a still larger number infants and children were not receiving sufficient attention in regard to cleanliness and diet.

An important part of the Visitors' work has been the inspection of cellars. Many of the tenants regard the cellar simply as a convenient place in which to deposit household filth and rubbish. In such cases the Visitors insist on the tenants removing the accumulation from the cellar to the yard, and it is then taken away by the Interception Department. Quite commonly the rubbish removed is of such an offensive nature as to make the person who removes it ill.

The following is a brief statement of the improvements which the Visitors required the tenants to effect:—

Rooms to be cleansed	...	...	...	...	3679
Filth to be removed from cellar	...	...	...	...	3027
Bedroom slops to be removed	...	...	...	...	6518
Windows to be opened	...	...	...	...	7521
Chimneys to be cleared	...	...	...	...	1986
Bedding to be cleansed	...	...	...	...	1781
Rubbish to be burned	...	...	...	...	470
Additional bedroom to be used	...	...	...	...	552
Beds to be screened off	...	...	...	...	144
Larger house to be obtained	...	...	...	...	344
Additional beds to be provided	...	...	...	...	245
Lodgers to be dismissed	...	...	...	...	57
Children to be washed	...	...	...	...	595
Children to be properly fed	...	...	...	...	563
Medical advice to be obtained	...	...	...	...	1561
Yard to be cleansed	...	...	...	...	573

The Visitors undertake to visit all children who are away from school on account of having "bad heads," and last year about 270 such cases were attended to. In almost all cases the trouble was due to vermin in the hair and scalp. This part of the Visitors' work has the double advantage of benefiting the children, whose health of course is seriously injured by their neglected condition, and at the same time calling the attention of the Visitors to houses which are almost always in need of visiting for other reasons.

Instructions to
health visitors.

During the year I drew up revised instructions for the guidance of the Visitors, a copy of which is subjoined:—

CITY OF BIRMINGHAM.

INSTRUCTIONS TO HEALTH VISITORS.

The Women Health Visitors are appointed to visit from house to house under the directions of the Medical Officer of Health, calling attention to the necessity for cleanliness of the house and its surroundings, giving advice as to the rearing of children and the nursing of the sick, distributing and explaining handbills on the Prevention of Infectious Diseases, and doing all they can in other directions to help the people whom they visit to keep their homes in as healthy a condition as possible. They will urge on all possible occasions the importance of cleanliness, thrift, and temperance.

They will attend at the Council House from 9 a.m. to 10 a.m., and remain on duty till 4 p.m. during November, December, and January, and till 4.30 p.m. during the rest of the year, an interval of an hour and a half being taken in the middle of the day. On Saturday they will remain on duty till 12 noon. In case of absence from duty for more than one day they will at once inform the Medical Officer of Health of the reason for the same.

Each Visitor is expected to make herself acquainted with her own district in order to discover which localities need to be systematically visited; and to visit from house to house in such localities as often as possible.

The following are some of the principal points to which attention should be directed:—

1. The house to be kept clean and free from bad smells. Wherever a bad smell exists, its cause should be discovered and removed.
2. The windows to be opened as much as possible, and the chimney not to be stopped up.
3. The beds and bedclothes to be kept clean, and the bedrooms attended to early in the day.

4. No bedroom to be overcrowded, and persons of opposite sexes, other than children and married people, not to sleep in the same room.
5. The cellar to be kept clean and free from house refuse, old bedding, and other accumulations of rubbish.
6. The yard and out-houses to be kept clean, and the drain traps free from obstruction. House refuse to be burnt whenever possible. No slops or wet refuse to be put in the ashplace.
7. Infants to be suitably fed, best of all at the mother's breast. Special attention to be paid to the quality of the milk and the cleanliness of the feeding bottle if the infant has to be fed by hand. Feeding bottles with tubes should never be used.
8. All young children to be kept clean and tidy, and those of school age sent regularly to school. Any cases of gross neglect of infants and children should be reported to the National Society for the Prevention of Cruelty to Children.
9. In cases of serious illness the necessity for medical advice should be pointed out. The Visitors must not recommend the use of medicines of any kind, but should enquire what instructions the doctor has given, and assist in getting them carried out.

In all cases where the tenant has been told to take certain steps to improve the condition of the house or its occupants, the house must be re-visited to see that the directions given have been carried out.

Any defective conditions for which the tenant is not responsible should be noted. If there is a probability that the necessary work will be done without a formal notice being served, and if the work is not of an urgent or difficult character, the Visitor should instruct the tenant to ask the landlord to do it, and subsequently revisit the house to see if it is done; if not, the defects will be referred by the Medical Officer of Health to the Inspector of Nuisances to be dealt with by him.

The following are some of the matters which are suitable to be thus referred :

Damp walls and floors.
 Filthy walls and ceilings.
 Windows which do not open.
 Defective rainwater spouts.
 Roofs which let in rain.
 Water in cellars.
 Drain traps or drain openings in cellars.
 Sinks not provided with traps and wastepipes, or otherwise defective.
 Obstructed water-closets and drains.
 Unset or defective drain traps.
 Defective paving and guttering.
 Filthy and defective closets and privies.
 Ashplaces without doors and coverings.
 Want of ashtubs.
 Defective urinals.
 Defective washhouses.

The Visitors are forbidden to give alms, but may recommend application to the Parish authorities and report cases of distress to charitable societies.

The Visitors will carry with them the handbills supplied by the Medical Officer of Health and distribute and verbally explain them where necessary, and as far as possible see that the instructions given in them are carried out.

ALFRED HILL, M.D.,
 Medical Officer of Health.

HOUSE ACCOMMODATION.

During the year 1901 I made a representation under Part 1 of the Housing of the Working Classes Act of a large area in the neighbourhood of Dartmouth Street as an unhealthy area. My representation came before the Housing Committee, who recommended the City Council

Unhealthy area
 near Dartmouth
 Street.

Dartmouth
Street unhealthy
area (continued).

not to make an Improvement Scheme under Part 1 of the Act, but to deal with the houses under Part 2, which is concerned with individual or separate houses and not with areas. The Council agreed to this course, and the Housing Committee then requested me to visit the area again and represent to them under Part 2 of the Act any houses which were in my opinion unfit for occupation, or which were "Obstructive Buildings" and should be demolished on that account. I accordingly visited all the 589 houses on the area a second time, making a detailed inspection of each, with the result that I found it necessary to report 202 as unfit for habitation and four as obstructive buildings.

In November last I received a complaint signed by twelve ratepayers, of which the following is a copy:—

" Sir,—

" We, the undersigned, being persons who are rated, or liable to be rated, under the provisions of the Housing of the Working Class (sic) Act, 1890, Part 2, do hereby certify to you that we believe the undermentioned area to be insanitary, and we hereby respectfully request you to inspect such area, and in your capacity as Medical Officer of Health to make an official representation to the Local Sanitary Authority in order that such area may be dealt with under the Act.

" AREA.

" All that area situated on Richard Street from the Oddfellows' Arms to the end of the street right-hand side going down, all Windsor Street from the corner of Richard Street right-hand side going up to Great Lister Street, all Great Lister Street both sides between Windsor Street and Adams Street, together with the courts, alleys and streets lying between these boundaries. The other side of the area would be Adams Street. This has already been duly represented to you, together with the portion of Richard Street which adjoins the public-house aforesaid, these being dealt with and are hereby dealt with simply for the purpose of identifying the area we hereby represent to you.

" We are, your faithful Servants,

- " THOMAS J. BASS, Vicar of St. Laurence, Birmingham.
- " THOMAS J. BONELL, 18 Bowyer Road, Saltley.
- " HARRY PARK, 172 Albert Road, Aston.
- " ERNEST S. MARSH, 169 Bevington Road, Aston.
- " WILLIAM CHANCE, 54 Bagot Street.
- " GEORGE HENRY WALTON, 19 Victoria Road, Aston.
- " ROWLAND ASHFORD, Brasbridge Street 36 (sic).
- " JOHN GODWIN, 103 Elkington Street.
- " JOHN TILLING, 13 Seymour Terrace, Sutton Street Aston.
- " HARRY SAMUEL GARDNER, 103 Hencage Street.
- " WILLIAM CHARLES COLE, 25 Sutton Street, Aston Manor.
- " EMMA READ, 280 Great Lister Street."

On the following day I received a letter from the Rev. T. J. Bass stating that the signatories to the above complaint desired to schedule only one side of Great Lister Street, between Windsor Street and Adams Street, viz., that nearest to the main part of the area.

The foregoing document should not properly have been referred to Part 2 of the Housing of the Working Classes Act, as large areas are dealt with in Part 1 of the Act, while Part 2 has special reference to individual unhealthy houses. This defect in the form of the complaint I attributed to the imperfect acquaintance of the memorialists with the Act, and proceeded to make an inspection of the 89 houses on this second area, 28 of which I represented under Part 2 of the Housing of the Working Classes Act as unfit for habitation.

In addition to these houses I examined and represented 220 as unfit for habitation, and four as obstructive buildings in various other parts of the town. The following is a list of the streets in which they are situated :—

Charles Henry Street	...	...	...	7
Great Barr Street	...	...	...	16
Cheapside	...	...	...	5
Essington Street	..	...	...	1
Sheepeote Lane	..	...	...	1
Slaney Street...	...	...	...	1
Blews Street	...	...	...	4
Moor Street	...	...	...	2
Little Ann Street	..	...	...	13
Digbeth	...	...	...	20
Bradford Street	...	...	...	1
Moseley Street	...	...	...	4
Milk Street	...	...	...	7
Newhall Street	..	...	...	9
Bishopsgate Street	..	...	...	9
Water Street	...	...	...	4
Hospital Street	..	...	...	4
Tower Street	...	...	...	5
Tennant Street	...	...	...	1
Stoke Street	..	...	...	4
Great Charles Street	..	...	...	3
Francis Street...	...	...	...	2
William Street	...	...	...	4
Oxford Street	...	...	...	21
Trent Street	...	...	...	2
Banbury Street	...	...	...	12
Cecil Street	...	...	...	20
Bartholomew Street	..	...	...	4
Rea Street	...	...	...	19
Lower Tower Street	...	...	...	8
Loveday Street	...	...	...	7

The total number of houses which I represented during the year as unfit for habitation is 450. All these are being dealt with by the Housing Committee.

Insanitary small
houses.

Daily observation shows that a very large number of small houses present defects, some of which are remediable, while others are not so, owing to their bad arrangement in relation to each other.

A condition which has always presented itself to my notice in this class of property is one of small dilapidations and dirty walls and ceilings, and it would be very desirable to have these defects more promptly corrected than they have been in the past.

The existence of dark, unventilated spaces, used as pantries where food has to be kept, is very common. They are extremely unsuitable for the purpose, but owing to the faulty construction of the houses, do not admit of effectual improvement, as they can neither be properly lighted nor ventilated. This is one of the many evils resulting from the arrangement of houses back-to-back. Of such back-to-back dwellings there are said to be about 40,000 in the city. Not only is the ventilation and lighting of the pantries in such houses generally impossible, but the houses themselves cannot by any means be efficiently ventilated, and they are consequently continually pervaded by foul air, the lowering effect of which on health is exceedingly injurious, though generally ignored.

But though no sufficient alteration to render them thoroughly healthy can be made in such dwellings, short of reconstruction on a better plan, there are minor defects which may be dealt with which have a considerable influence in diminishing comfort, health and vitality, such as windows that cannot be opened, dirty walls both up and down-stairs, defective and worthless plaster, dilapidated brickwork, objectionable untrapped sinks, faulty roofs, defective spouting, irregular yard pavement lodging liquid more or less, obstructed and broken drain traps, offensive ashpit privies, and inadequate wash-house accommodation.

These points have been and are receiving daily attention, but judging from the present state of properties I am driven to the conclusion that the work of amelioration is too slow.

Defective
conditions
remedied.

Last year at the instance of your officers 2,101 houses had their walls and ceilings cleansed, and 2,935 were put in better repair. More satisfactory ventilation was provided at 200 houses. In 790 instances the spouting was repaired, and in 321 water was removed from the cellars.

Need of more
small houses.

I have already stated that, according to the census returns, there are 1,500 fewer three-roomed tenements in Birmingham than there were ten years ago, notwithstanding a great increase in the population, and at the present

time the number of healthy small houses is not sufficient for the needs of the labouring classes who have to occupy them. As a consequence houses are being occupied which are unfit for habitation, and yet are actually bringing in more rent than they did a few years ago, while the tenants are afraid to ask for necessary repairs to be done for fear the rent should be raised.

I have before me now a statement of the rents paid in one of the poorest and most unhealthy streets in Birmingham. This statement shows the rent of each house in 1902, and side by side with the latter the rent which was being paid five years ago. There are altogether 194 houses in the street, and five years ago more than half of them were let at 3s. per week or less. During the last five years out of the total of 194 houses no less than 127 have had their rent raised, and the street is now producing £159 per annum more than it did five years ago, the average increase in the rents being 10 per cent. Yet, notwithstanding this increase in rental, a very large proportion of the houses are in such a state that they are not fit for habitation. It would be quite impossible to obtain the higher rents for these houses if it were not for the scarcity of small houses in the City at the present time.

In my judgment the most crying need of Birmingham at the present moment is better house accommodation for the labouring classes. Houses of three and four rooms are being continually removed, largely for the purpose of making room for business premises. No similar houses have been built for many years past, and the tenant who wants a three-roomed house in sound repair has great difficulty in finding one. Until such houses are provided, it is impossible to deal in a satisfactory manner with the defective dwellings which now exist in large numbers, and unless there are reasonable grounds for expecting such houses to be built as an ordinary commercial undertaking I consider it the immediate duty of the City Council to erect them as they have the power to do under Part 3 of the Housing of the Working Classes Act. I do not believe for one moment that consumption and certain other preventable diseases will ever be stamped out until new, healthy houses have been provided in place of the old, dilapidated, badly-constructed dwellings in which so large a proportion of our population at present resides.

COURTS AND YARDS.

The condition of courts and back-yards has an important bearing on the health of the persons living in the adjacent houses, and I consider it most desirable that every court and yard should be well paved with some impervious material. The soakage of filth into unpaved ground is

Courts and
yards.

highly favourable to the continuance and spread of certain diseases, such as typhoid fever, and has also a debilitating influence on the system resulting in general ill-health.

At the request of your officers 108 courts and yards were paved last year, and 316 others were repaired. A great deal of difficulty is commonly experienced in getting courts paved, and it would be an advantage to obtain more definite powers with respect to the matter. In some towns a bye-law is in force requiring that all yards, whether in connection with old or new houses, shall be paved. The following is a copy of one such bye-law which, I understand, is in force at Sutton in Surrey:—

Bye-law as to
paving of yards
at Sutton
(Surrey).

“The owner of *every* dwelling house in connection with which there is any yard or open space shall, where it is necessary for the prevention or remedy of insanitary conditions that all or part of such yard or open space shall be paved, forthwith cause the same to be properly paved with a hard, durable, and impervious pavement of flagging or paving bricks evenly and closely laid upon a sufficient bed of good concrete, mortar, sand or other suitable material, and properly jointed, or with good cement concrete, or with good asphalt on a proper foundation, and so sloped to a properly constructed channel as effectually to carry off all rain or waste water therefrom.”

Cleansing of
courts.

In 4,577 instances courts were cleansed by the Cleansing Staff, the cost being borne by the tenants or landlords. In 1,709 other instances notices to cleanse were served on the tenants and complied with.

EXCREMENT DISPOSAL.

Closet accom-
modation.

The disposal of excrement in Birmingham is effected partly on the conservancy system and partly on the water-carriage system, rather more than half the houses in the town having water-closets, while a small number of others have ashpit privies and the remainder pan privies.

For many years past water-closets have been insisted on at all new houses, while an enormous number of old-fashioned ashpit privies have been converted into water-closets. More recently efforts have been made to get the worst of the pan privies replaced by water-closets, which are in the nature of things much cleaner and healthier.

Nuisance from
pan privies.

No one who has wide experience in visiting the poorer parts of Birmingham can fail to be struck with the offensive and insanitary character of the majority of the pan privies. In a great town even under the best of conditions such privies are certain to be a nuisance, but, unfortunately, in Birmingham a great number of them

are constructed in a most unsatisfactory manner. In courts they are often built in large blocks and placed in confined situations where the effluvium from them cannot be dispersed by natural atmospheric means. In many houses which have a pan privy to themselves the pan adjoins the scullery wall, on the other side of which is the furnace and "copper" used for washing: when the latter is in use the contents of the pan become heated and emit a more than ordinary sickening odour.

I have many times reported that the pan privies, as well as the ashpit privies, ought to be abolished, and I am pleased to know that your Committee shares this view, and that last year a much larger number than in any previous year was converted into water-closets. The following is a list of improvements made during 1902 in the closet accommodation under orders from the Health Department:—

Conversion of
pan and ashpit
privies.

Ashpit privies converted to water closets	...	874
Pan privies converted to water closets	...	871
Pan privies repaired	...	281
Privies and closets limewashed	...	824
Water closets repaired	...	792
Additional water closets provided	...	113
Soilpipes removed from inside houses	...	15

During the year I specially inspected, at the request of the Inspector of Nuisances, a number of pan privies which needed conversion to water-closets, and where necessary gave evidence at the police court in favour of such conversion.

In order to keep the pan privies as free from nuisance as possible they are from time to time swept, swilled, and deodorized by the Cleansing Staff.

Cleansing of pan
privies.

REFUSE DISPOSAL.

House refuse is removed by the Corporation, for the most part in tubs or pails, which are emptied once a week. The greater part of the refuse is burned in destructors, the remainder being either taken to tips or sold for manure. The quantity of refuse disposed of last year was as follows:—

Refuse disposal

Refuse sent to tips	...	29382 tons.
Refuse burned in destructors	...	120914 „
Mixed manure, ashpit manure, and market refuse sent to tips or farms	...	61438 „
Brick ends and pots sent to tips	...	312 „
Glass sold	...	26 „
Tin and iron sold	...	393 „

To facilitate the proper storage and removal of refuse 1,373 additional ashtubs or pails were ordered and provided.

Additional ash-
tubs provided.

Cleansing of
ashplaces.

The staff employed by your Committee carried out 73,058 cleansings of ashplaces.

SEWERAGE AND DRAINAGE.

Sewage disposal.

The sewage of Birmingham and a large number of suburban districts is dealt with by the Tame and Rea District Drainage Board at their sewage farm at Tyburn, where they also have a number of bacterial beds.

The City Surveyor's returns show that considerable improvements have recently been made in the sewers in various parts of the City.

Drainage.

The work done at the instance of the Health Department and by the Cleansing Staff for improving house drainage was as follows :

Drains opened and cleansed	..	..	..	2523
Drains efficiently trapped	...	...	...	1717
Drains tested by the smoke test	...	...	...	69
Drains relaid or repaired	...	...	...	453
Drains in cellars disconnected or abolished	...	...	...	119
Sink drains disconnected	...	...	...	47
Sink bendpipes repaired or affixed	...	...	...	324
Premises supplied with additional drains	...	...	...	133
Yard traps cleansed by staff	...	...	...	176274
Surface drains cleaned by staff	...	...	...	79004

LODGING-HOUSES.

Common
Lodging
Houses.

At the close of the year the number of Common Lodging Houses in the City had fallen to 72; at the beginning of the year there were 76. The 72 houses are registered to accommodate 2,587 lodgers, practically the same number as in the previous year.

The Common Lodging Houses are kept under constant supervision, and taking into account the class of persons by whom they are used, are generally in a satisfactory condition.

Houses let in
lodgings.

The number of houses put on the register as "let in lodgings" (furnished rooms) has increased from 178 at the beginning of the year to 228 at its close. They afford accommodation for 1,198 lodgers, and are not on the whole in as satisfactory a condition as the Common Lodging Houses.

The total number of visits paid to the Common Lodging Houses and the Houses let in lodgings is 17,319, of which 16,093 were paid during the day, and 1,226 at night. Nine persons were summoned for offences against the regulations.

CANAL BOATS.

The Assistant Inspector, who gives his whole time to Canal boats. this work, met with 919 boats last year, carrying 1,422 men, 491 women, and 511 children, 285 of the latter being under five years of age.

Twelve boats were found to be unregistered. Fifteen others were not carrying their certificate of registration as they should do, and 15 were not properly marked. Ten cases of overcrowding were detected, and in ten instances the separation of the sexes was not properly carried out. Ten boats were not supplied with a suitable receptacle for drinking water, and seven were not in a habitable condition. All the defects were, however, attended to and remedied without recourse to legal proceedings.

Twenty-five boats were registered during 1902, and at the end of the year there were 376 on the register.

WORKSHOPS.

The Factory and Workshops Act, 1901, came into New Factory and Workshops Act. force on the first day of January, 1902, and by it several important alterations are made in the law relating to workshops.

By Section 1 the provisions as to cleanliness, prevention of effluvia and overcrowding are more clearly defined.

Power is also given under Sub-section 3 of Section 2 for ordering the cleansing of workshops if the Medical Officer of Health or Inspector of Nuisances certifies *that it is necessary*. Previously we had only power to order this to be done every fourteen months. If the person on whom notice is served fails to comply he is liable to a fine of 10s. per day, and the Local Authority may do the work and recover costs.

Every workshop must be sufficiently ventilated as before, but Section 8 enables the Secretary of State to prescribe a standard of sufficient ventilation of workshops in which women are employed.

Section 8 provides for sufficient drainage of floors in factories or workshops where they are likely to be wet and in which women are employed.

Section 9 increases powers already given under Section 22 of the Public Health Acts Amendment Act, 1890.

Under Section 74 a fan or other mechanical means for ventilation may be ordered in factories or workshops where

New Factory !
and Workshops
Act (continued)

trades in which dust, gas, vapours, etc., are generated, are carried on. Wherever the Local Authority thinks such a fan is required they must report the matter to the Factory Inspector.

Section 101 provides that after January 1st, 1904, an underground bakehouse shall not be used unless certified by the Local Authority to be suitable for that purpose, and that no new underground bakehouses shall be allowed.

Certain important new provisions relate to out-workers.

In some trades such as tailoring, upholstery, file-making, etc., the Local Authority may prohibit the sending out of work to any house which is in such a state as to be injurious to the workers.

The Local Authority may also prohibit out-work being done in certain trades at any house where there is infectious disease. Occupiers of factories in these trades are required to send a list of out-workers to the Local Authority every February and August, so that the Authority may know where such work is being done. If any out-worker lives outside the district his name and address must be forwarded to the proper Authority.

The Act requires the Local Authority to keep a register of workshops, and also instructs the Medical Officer of Health to report specifically in his Annual Report on Workshops, and to forward a copy to the Secretary of State. Both these requirements were already being carried out in Birmingham, but are now made compulsory.

In accordance with the provisions of the Act a register has been kept of all workshops, and systematic visiting of these has been carried out during the year by two Assistant Inspectors, who give their whole time to work in connection with the Factory and Workshop Acts, the chief object of the visits being to see that cleanliness is observed, that the workshops are not overcrowded, and that they are properly ventilated, especially in places in which dust is produced by the processes carried on. Attention is also paid to the provision of sufficient closet accommodation, it being necessary to provide separate closets for the male and female workpeople.

All workshops in which any woman, young person, or child is employed, and in which an abstract of the Act is not displayed, have been reported to the Factory Inspector, and all complaints received from him relating to nuisances arising from dirty walls, defective drains, or water closets, offensive privies, etc., have been immediately attended to.

The total number of visits paid to workshops was 11,864, and the table below indicates the nature of the sanitary improvements effected :—

Visits to Work-shops.

Workshops limewashed	1327
„ repaired	156
„ efficiently ventilated	164
„ rendered safe	16
„ discontinued to be used as dwellings	10
Water Closets provided	175
„ „ repaired	217
Ashpit Privies converted to water closets	9
Pan privies converted to water closets	50
Urinals provided	33
Drains repaired or trapped	117
Drains removed	10
Cases of overcrowding remedied	30
Yards paved or repaired... .. .	47
Accumulations of refuse removed	30
Animals removed... .. .	7

Attention has been given to the provisions contained in the Act by which the Sanitary Authority may prohibit home work of certain kinds, such as tailoring, upholstery, electro-plating, file-cutting, being done in houses where it is likely to be dangerous either to the health of the workers themselves on account of overcrowding, bad ventilation, etc., or to the health of other people owing to the presence of infectious disease. Lists of persons to whom work is given to be done away from the factory have been sent to me twice a year through the Town Clerk, and as far as possible their homes have been visited to see that the conditions under which the work is done are satisfactory.

Visits to homes of outworkers.

The provisions of the Act relating to means of escape in case of fire have been referred by the City Council to the Watch Committee and carried out by them.

BAKEHOUSES.

In addition to the sanitary provisions which apply to all factories and workshops, there are certain others which apply specially to bakehouses. No bakehouse must communicate directly with any closet or drain, every bakehouse must be limewashed once every six months, or painted once in seven years and scrubbed twice a year, and no bakehouse must have a sleeping place attached to it unless the latter is completely partitioned off, and has an external window measuring nine square feet, and made to open.

Bakehouses.

In order to see that the regulations are complied with, 1,303 visits were paid last year, and limewashing was ordered in 165 instances.

MILKSHOPS AND DAIRIES.

Milkshops and dairies.

At the end of the year there were on the register 3,062 milkshops, 130 purveyors of milk, and 24 dairies. The new applications to be put on the register amounted to 590, and all but 18 of them were granted. The visits paid to milkshops numbered 5,555, and to dairies 150.

The following unsatisfactory conditions were found and remedied:—

Vinegar, oil, or tripe business carried on	175
Premises requiring limewashing	28
Dirty vessels found at milkshops	7
Dirty churns found at railway stations	6

Fifty-seven cases of infectious disease were reported at milkshops, and due precautions were taken to prevent the spread of infection, the business being as a rule either discontinued or removed to other premises.

COWSHEDS.

Cowsheds.

Cowsheds are inspected by the Veterinary Surgeon, Mr. Malcolm, F.R.C.V.S., and his Assistant. At the end of the year there were sixty cowsheds in the City, owned by twenty-six cow-keepers, and registered to hold 613 cows.

Five cowsheds were removed from the register and five were put on; one application to be registered was refused, and six others were deferred until certain alterations are made to the premises.

The Veterinary Inspectors arrange to see each cowshed and the cattle in it about once a month. The total number of visits paid last year was 668.

As a result of the inspections made, 58 cows were subjected to special examination, and 42 of them were found to be suffering from inflammation of the udder, making it necessary to prohibit the sale of the milk. The other 16, after being carefully examined, were passed. No case of tuberculosis of the udder was found.

In several instances it was found necessary to insist on greater cleanliness being observed, and in four cases official notices were issued to this effect. As a rule, however, the cows and cowsheds were found to be well looked after.

SLAUGHTER HOUSES.

Slaughter houses.

The inspection of slaughter houses is carried out by the officers of the Markets and Fairs Committee, under the

direction of the Superintendent of Markets. Last year 10,414 visits were paid to them. No serious breaches of the regulations were discovered, but in ten cases cleansing of the premises was ordered.

UNWHOLESOME FOOD.

During the year I examined a considerable quantity ^{Bad meat.} of bad meat submitted to me by the Meat Inspectors, and certified that it was unfit for food. I also gave evidence at the police court in several prosecutions for exposing bad meat for sale.

Only 15 lots of bad meat were actually seized by the Inspectors, but 2,227 lots were voluntarily handed over to them. The total weight destroyed was 231 tons. Six persons were summoned for offering bad meat for sale, and fines amounting to £100 were inflicted upon them.

Three other persons were summoned for exposing bad ^{Bad fish.} fish for sale, two of whom were fined and one sent to prison. Thirty-nine tons of bad fish were destroyed, five lots having been seized, and 558 surrendered.

Nine tons of bad fruit, etc., were either seized or given ^{Bad fruit} up and destroyed.

WATER SUPPLY.

Periodical examinations, both chemical and bacterio-^{Corporation} logical, have been made of the Corporation Water Supply, ^{water supply} and they show that its quality has been well maintained. At present the water is obtained from streams and deep wells in the neighbourhood, but the scheme for bringing water to the town from Radnorshire will be completed in the course of a few years.

A small number of houses in the town are supplied ^{Well water.} with water from surface wells, two of which were closed last year.

SMOKE NUISANCES.

The following statement shows the work done by the ^{Smoke.} department in connection with the emission of smoke from factory chimneys:—

Observations made by Inspectors	...	...	...	13445
Manufacturers reported for breaking the regulations				139
„ cautioned	...	...	...	89
Manufacturers summoned	...	...	...	50
Amount of penalties	...	...	...	£33 15s 0d.
„ costs	...	...	...	£19 8s. 6d.

OFFENSIVE TRADES.

Offensive trades.

Very few offensive trades are carried on in Birmingham, and no complaints were received respecting them. No applications to establish such businesses in fresh places were made.

ABATEMENT OF NUISANCES.

Abatement of nuisances.

About nineteen thousand nuisances of various kinds were dealt with during the year; the work done in connection with them is set out in Table IX.

Forty-seven persons were summoned for failing to abate nuisances after due notice had been given. The nuisances respecting which summonses were issued included some arising from defective ashpit and pan privies, others from defective roofs and spouting, some from liquid filth in cellars, and some from the improper keeping of animals.

I remain,

Mr. Chairman and Gentlemen,

Your obedient Servant,

ALFRED HILL, M.D.,

Medical Officer of Health.

APPENDIX.

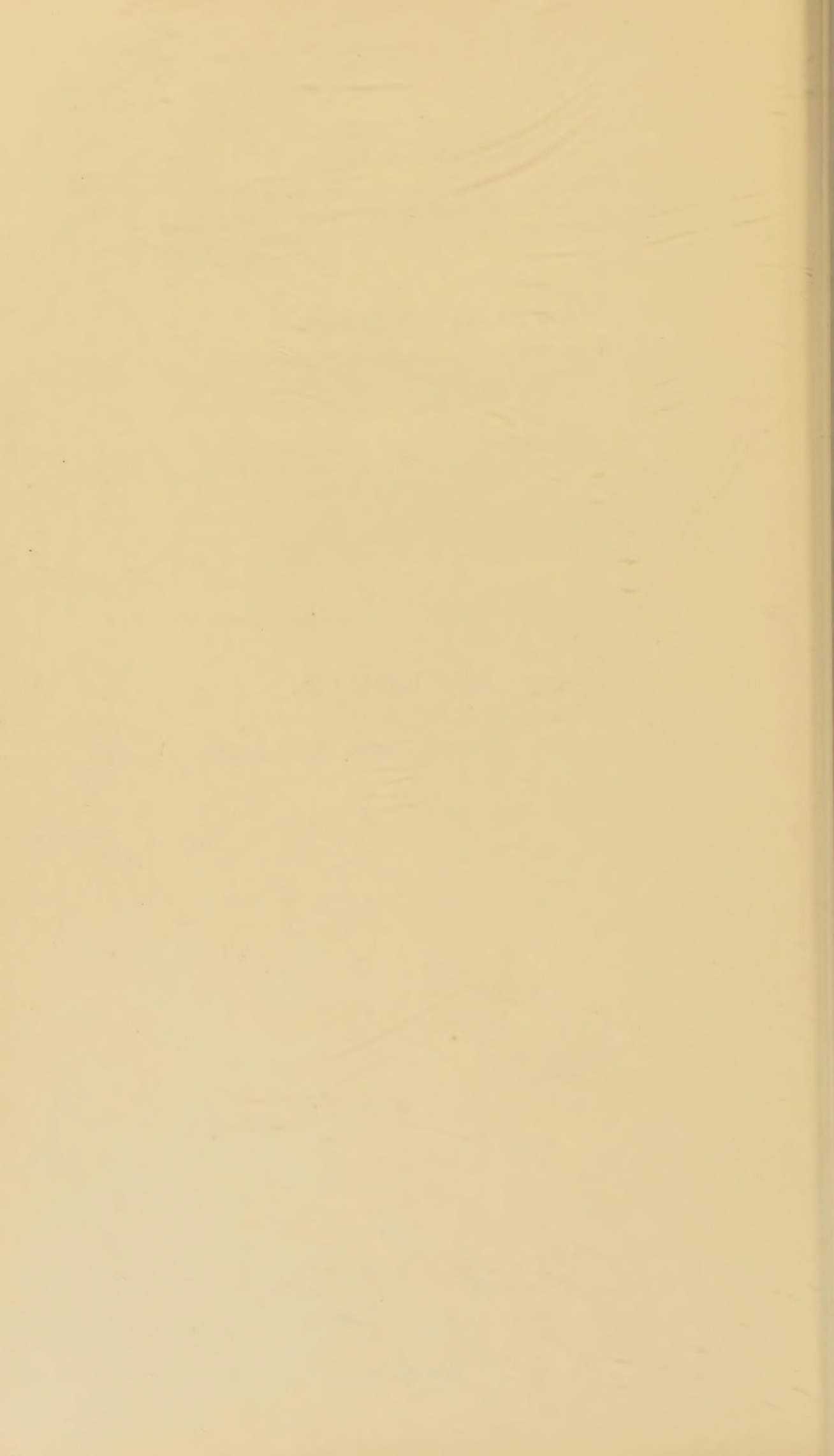


TABLE I.—VITAL STATISTICS OF WHOLE DISTRICT DURING 1902 AND PREVIOUS YEARS.

Year.	Population estimated to middle of each year.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				Total Deaths in Public Institutions in the District.	Deaths of Non-residents registered in the District.	Deaths of Residents registered beyond the District.	NETT DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
		Number.	Rate.*	Under 1 Year of Age.		At all Ages.					Number.	Rate.*
				Number.	Rate per 1,000 Births registered.	Number.	Rate.*					
1	2	3	4	5	6	7	8	9	10	11	12	13
1892.	483,526	16,026	33·2	2,664	166	9,642	20·0	1,411	—	—	—	—
1893.	487,897	15,881	32·6	3,146	198	10,445	21·5	1,631	—	—	—	—
1894.	492,301	15,505	31·6	2,539	164	8,946	18·2	1,549	—	—	—	—
1895.	496,751	16,014	32·3	2,910	182	9,863	19·9	1,656	—	—	—	—
1896.	501,241	16,582	32·5	3,265	197	10,405	20·4	1,554	—	—	—	—
1897.	505,772	16,771	33·2	3,594	214	10,668	21·1	1,489	—	—	—	—
1898.	510,343	17,289	34·0	3,287	190	9,936	19·5	1,518	—	—	—	—
1899.	514,956	17,609	34·3	3,398	193	10,446	20·3	1,614	247	325	10,524	20·5
1900.	519,610	16,941	32·7	3,366	199	10,756	20·8	1,911	267	393	10,882	21·0
1901.	523,284	16,735	32·1	3,150	188	10,357	19·8	1,802	302	347	10,402	19·9
Averages for years 1892-1901	503,568	16,535	32·8	3,132	189	10,146	20·1	1,613	—	—	—	—
1902.	528,181	17,103	31·9	2,681	157	9,577	17·8	2,082	312	407	9,672	18·0

* Rates in Columns 4, 8, and 13 calculated per 1,000 of estimated population. + 53 weeks.
 Total population at all ages at Census of 1901 522,204.
 Number of inhabited houses " " 107,831.
 Average number of persons per house at Census of 1901, 4·8.

TABLE II.—VITAL STATISTICS OF SEPARATE LOCALITIES IN 1902 AND PREVIOUS YEARS.

Year.	Population estimated middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.	Population estimated to the middle of each year.	Deaths at all ages.	Death-rate per 1,000.
Wards	ROTTON PARK.			ALL SAINTS'.			LADYWOOD.			ST. PAUL'S.			ST. GEORGE'S.			ST. STEPHEN'S.		
1899	41,673	758	18.2	40,009	705	17.6	25,140	496	19.8	17,113	376	22.0	20,641	490	23.8	23,533	624	26.6
1900	43,339	773	17.8	42,251	828	19.6	25,177	484	19.2	17,025	346	20.4	20,473	539	26.3	23,385	615	26.3
1901	46,835	752	16.1	41,444	725	17.5	25,089	502	20.0	14,954	338	22.6	20,230	469	23.2	23,765	633	26.6
1902	46,088	677	14.4	41,834	659	15.5	25,128	444	17.3	15,552	289	18.2	20,434	449	21.6	23,720	640	26.5
Wards	ST. MARY'S.			ST. BARTHOLOMEW'S.			MARKET HALL.			ST. THOMAS'.			ST. MARTIN'S.			EDGECASTON AND HARBORNE.		
1899	15,536	476	30.7	26,947	732	27.2	11,030	207	18.8	18,682	428	22.9	23,941	503	21.0	30,313	418	13.8
1900	15,570	475	30.4	27,063	749	27.7	10,858	234	21.5	19,057	399	20.9	24,143	527	21.9	30,718	441	14.4
1901	15,904	472	29.7	26,857	696	25.9	9,807	171	17.4	19,215	402	20.9	23,950	485	20.3	30,795	402	13.1
1902	15,993	405	24.8	26,876	678	24.6	9,570	165	16.9	18,586	381	20.1	24,097	499	20.3	31,200	390	12.3
Wards	DERITEND.			BORDERSLEY.			DUDDESTON.			NECHELLS.			BALSALL HEATH.			SALTLEY.		
1899	25,346	618	24.4	52,206	807	15.5	24,038	512	21.3	33,773	761	22.5	38,120	666	17.5	36,717	672	18.3
1900	24,771	645	26.0	53,770	851	15.8	24,274	569	23.4	33,701	739	21.9	38,579	619	16.0	40,829	681	16.7
1901	24,704	550	22.3	54,686	843	15.4	23,921	555	23.2	33,624	760	22.6	38,827	582	15.0	42,250	741	17.6
1902	24,516	507	20.3	55,606	761	13.4	23,773	517	21.3	33,384	636	18.7	39,025	589	14.8	44,185	679	15.1

NOTE.—The inmate of large Institutions are not included in the Ward populations, and the deaths amongst them have been referred, as far as possible, to the Wards in which the deceased persons had previously resided.

TABLE III.

Cases of INFECTIOUS DISEASE NOTIFIED during the Year 1902.

NOTIFIABLE DISEASE.	CASES NOTIFIED IN WHOLE DISTRICT.							TOTAL CASES NOTIFIED IN EACH WARD.																				
	At all Ages.	At ages—Years.						Kotton Park, 1	All Saints, 2	Ladywood, 3	St. Paul's, 4	St. George's, 5	St. Stephen's, 6	St. Mary's, 7	St. Bartholomew's, 8	Market Hall, 9	St. Thomas, 10	St. Martin's, 11	Edgbaston and Harborne, 12	Deritend, 13	Bordesley, 14	Puddeston, 15	Nechells, 16	Balsall Heath, 17	Salfley, 18	Institutions, 19		
		Under 1.	1 to 5.	5 to 10.	10 to 15.	15 to 25.	25 to 45.																				45 to 65.	65 and up.
SMALLPOX ...	69	1	1	5	3	16	32	11	...	11	4	1	...	1	3	9	7	..	...	4	...	1	5	1	1	...	15	6
SCARLET FEVER ...	5044	60	1563	1922	800	498	190	10	1	643	384	287	101	96	96	120	219	63	227	205	246	352	589	210	253	354	397	202
DIPHTHERIA ...	720	17	218	167	92	117	88	21	...	113	65	70	36	12	17	19	22	8	25	37	38	33	55	30	43	44	42	11
MEMBRANOUS CROUP	67	11	39	13	4	...	...	...	...	4	8	5	2	3	4	1	7	1	2	7	1	...	4	3	6	1	8	...
TYPHUS FEVER ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ENTERIC FEVER ...	544	1	19	58	71	195	172	25	3	33	38	27	17	31	24	16	34	6	23	31	14	50	51	31	54	26	34	4
SIMPLE CONTINUED FEVER ...	3	...	...	...	1	...	1	1	...	...	...	...	...	...	...	...	...	..	1	...	...	1	1	...	...	...	...	...
RELAPSING FEVER ...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...
PUERPERAL FEVER..	35	...	...	...	...	10	25	...	...	3	3	1	1	2	1	2	4	1	...	1	2	1	4	3	1	1	4	...
CHOLERA ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
ERYSIPELAS ...	762	31	37	45	26	106	270	185	62	67	62	44	23	26	16	30	63	13	33	36	17	30	75	29	39	42	74	43
CHICKENPOX ...	1548	194	678	555	76	33	12	...	...	127	181	60	27	92	69	39	55	16	32	46	69	58	164	86	141	91	142	53
TOTALS ...	8793	315	2555	2765	1073	975	791	253	66	1001	745	495	207	263	230	236	412	108	343	367	387	526	948	393	538	559	716	319

TABLE IV.
DEATHS OF PERSONS BELONGING TO BIRMINGHAM DURING THE YEAR ENDING JANUARY 3RD, 1903.

	AGES.								WARDS.												City.							
	0-1	1-5	5-10	10-15	15-25	25-45	45-65	65 and up.	Rotton Park.	All Saints.	Ladywood.	St. Paul's.	St. George's.	St. Stephen's.	St. Mary's.	St. Bartholo- mew's.	Market Hall.	St. Thomas.	St. Martin's.	Edgbaston & Harborne.		Deritend.	Bordesley.	Duddeston.	Nechells.	Balsall Heath.	Saltley.	Not located.
ALL CAUSES	2681	1322	262	122	386	1276	1929	1694	677	659	444	289	449	640	405	678	165	381	499	390	507	761	517	636	589	679	307	9,672
Smallpox	37	147	4	1	..	1	2	..	13	7	12	8	17	36	14	27	1	..	5	1	5	7	5	7	7	1	..	4
Measles	10	199	64	11	5	4	..	..	35	23	20	6	7	10	8	23	3	11	15	10	19	31	16	14	20	2	..	189
Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	293
Typhus Fever	2	2	1	1	1	22	24	23	12	8	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	76
Influenza	122	136	11	6	2	..	..	..	16	20	8	8	26	30	16	15	5	7	14	1	9	21	10	18	24	16	5	269
Whooping Cough	16	74	30	6	2	..	..	..	15	10	6	10	2	7	5	5	..	4	11	2	10	15	7	14	5	5	..	30
Diphtheria, Membranous Croup	3	2	1	1	..	..	..	..	5	5	6	3	6	7	5	5	..	..	7	..	9	7	5	9	8	9	..	100
Croup	..	5	8	8	37	34	6	2	5	5	6	3	6	7	5	5	..	2	7	2	9	7	5	9	8	9	..	6
Enteric Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	100
Asiatic Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea, Dysentery	151	21	2	1	..	4	14	14	10	17	11	6	7	15	2	24	4	13	5	5	9	21	11	9	8	23	7	207
Epidemic or Zymotic Enteritis	176	24	3	..	..	3	2	..	2	7	4	5	44	31	24	30	..	12	5	3	8	16	10	13	6	15	4	205
Enteritis	78	16	2	..	..	8	12	6	7	47	3	6	11	1	12	5	1	4	..	1	7	7	4	25	4	3	4	122
Other Continued Fevers	1	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	2
Zoogenous Diseases	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Veneral Diseases	32	1	..	..	..	6	4	3	3	1	4	2	2	1	1	1	1	1	4	3	1	2	2	4	1	3	..	46
Erysipelas	15	..	..	1	..	3	8	3	4	2	1	4	2	..	1	2	1	1	2	1	2	2	3	1	1	1	..	30
Puerperal Fever	..	..	..	..	7	15	5	4	3	3	1	1	1	4	1	3	..	..	3	..	..	2	4	5	2	4	1	39
Other Septic Diseases	7	6	..	3	5	9	..	..	3	3	2	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Malarial Diseases	..	..	..	..	..	1	..	2	3	3	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	..	..	5	6	6	10	3	2	3	1	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Parasitic Diseases	1	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculosis of Meninges	21	33	3	4	1	..	1	..	10	5	3	..	..	2	..	2	2	1	4	5	4	4	3	7	4	4	..	3
Tuberculosis of Lungs	4	14	12	9	430	419	255	31	43	55	43	42	44	67	36	65	16	28	55	33	53	61	47	51	52	57	29	874
Tuberculosis of Intestines	56	25	5	1	1	3	3	3	10	8	5	6	3	5	3	1	3	3	5	1	5	5	6	14	3	8	1	92
Tuberculosis (other forms)	17	24	5	4	8	5	4	..	5	5	6	1	2	4	5	5	..	2	2	3	3	4	5	3	3	3	..	64
Alcoholism	..	..	..	..	..	11	12	1	..	4	..	..	..	1	4	3	1	1	4	1	1	3	1	..	5	1	..	24
Lead Poisoning	..	..	..	..	1	2	..	110	25	30	18	14	16	24	11	16	6	17	15	28	21	33	25	22	1	..	..	3
Cancer	..	2	..	..	3	55	213	97	14	7	7	2	3	7	3	3	2	6	6	10	4	7	6	3	7	7	6	383
Other Constitutional Diseases	8	5	3	2	12	14	35	..	45	30	26	4	15	21	5	23	1	18	7	5	30	35	28	15	20	24	2	106
Premature Birth	361	42	..	..	..	..	..	..	45	32	17	10	12	43	22	46	20	24	39	12	31	38	49	58	36	24	9	361
Debility, Marasmus	562	39	..	..	..	1	..	..	10	14	8	4	5	6	6	8	..	8	13	7	19	17	8	12	14	18	23	604
Other Developmental Diseases	439	..	..	..	..	..	..	..	10	14	8	4	5	6	6	8	..	8	13	7	19	17	8	12	14	18	5	179

DEATHS OF PERSONS BELONGING TO BIRMINGHAM DURING THE YEAR ENDING JANUARY 3RD, 1903—continued.

	AGES.							WARDS.															City.						
	0-1	1-5	5-10	10-15	15-25	25-45	45-65	65 and up.	Rotton Park.	All Saints.	Ladywood.	St. Paul's.	St. George's.	St. Stephen's.	St. Mary's.	St. Bartholomew's.	Market Hall.	St. Thomas.	St. Martin's.	Edgbaston & Harborne.	Deritend.	Bordesley.		Buddleston.	Nechells.	Balsall Heath.	Saltley.	Not located.	
Old Age	172	31	3	..	..	..	20	372	19	20	16	6	17	12	21	14	8	18	22	21	23	25	19	35	25	33	38	392
Convulsions	56	62	6	..	..	..	15	..	13	26	10	5	10	12	6	18	1	4	9	7	9	17	19	11	12	17	2	208
Meningitis	2	..	..	..	..	..	..	..	13	5	4	5	4	4	9	13	3	2	9	5	11	11	12	19	8	13	..	155
Cerebro-spinal Meningitis	2	..	1	2	1	3	7	..	..	..	..	..	1	..	..	..	..	..	..	1	..	..	..	1	..	..	..	5
Inflammation and Softening of Brain	11	11	2	..	..	..	190	180	36	32	30	13	18	38	12	26	11	20	21	27	26	37	21	21	27	36	35	487
Other Diseases of Nervous System	5	4	..	2	2	3	2	..	6	1	1	..	1	1	..	1	..	..	34	..	24	72	40	35	58	45	27	685
Diseases of Ear, Eye, and Nose	20	8	8	17	32	118	248	284	40	47	33	19	27	24	33	31	12	38	34	..	10	8	6	1	16	5	7	129	
Heart Diseases .....	..	..	..	..	6	56	291	328	50	71	35	25	71	96	59	79	23	31	52	36	54	79	50	65	48	59	31	1014
Other Diseases of Circulatory System	219	110	4	..	..	135	194	93	63	61	39	18	41	52	36	101	12	38	49	28	38	72	37	47	50	65	14	861
Bronchitis	190	175	34	9	31	135	194	93	63	61	39	18	41	52	36	101	12	38	49	28	38	72	37	47	50	65	14	861	
Pneumonia .....	..	4	1	..	1	6	11	2	2	7	2	1	..	1	1	1	..	1	1	1	1	..	1	..	2	3	..	25
Pleurisy	8	12	2	..	2	9	19	11	7	6	6	4	4	2	4	5	1	2	3	1	3	3	1	..	2	3	..	63	
Other Diseases of Respiratory System	48	8	2	1	14	15	24	14	8	4	3	4	7	9	7	6	2	3	8	9	6	18	2	20	3	6	1	126	
Diseases of Stomach	6	..	2	2	..	8	8	12	4	3	1	1	3	4	2	1	2	1	2	3	3	7	..	1	1	7	..	42	
Obstruction of Intestines	23	59	12	5	6	2	4	4	6	8	10	1	1	3	8	5	8	5	8	9	3	7	..	95
Cirrhosis of Liver	6	13	5	7	13	24	28	26	11	9	7	3	3	9	2	3	3	2	10	7	8	11	8	9	11	9	3	122	
Other Diseases of Digestive System	2	2	1	..	3	5	3	1	..	..	2	1	..	..	..	..	2	2	1	17	2	2	..	..	2	3	..	17
Dis. of Lymph. System & Ductless Glands	4	8	4	4	9	48	77	29	14	12	9	6	8	8	..	5	5	11	7	17	10	12	11	11	12	10	7	183	
Nephritis and Bright's Disease .....	..	2	1	..	3	5	3	1	..	..	2	1	..	..	..	..	2	2	1	4	5	2	3	2	2	3	..	..
Other Diseases of Urinary System	1	2	1	..	..	3	14	23	3	5	..	..	1	1	1	6	..	1	4	..	..	..	..	..	2	3	3	44
Diseases of Male Genital Organs .....	..	..	..	..	..	..	..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	9
Diseases of Female Genital Organs .....	..	..	..	..	..	4	5	..	1	2	1	..	1	3	2	7	1	..	2	3	1	1	4	..	..	5	..	37
Accidents and Diseases of Parturition	2	2	1	2	1	2	..	..	2	2	2	2	..	2	1	..	1	..	..	..	1	1	..	..	1	1	..	11
Diseases of Osseous System	4	1	..	..	..	1	3	3	1	1	..	..	1	4	2	4	2	4	6	..	9	3	3	5	3	4	..	12
Diseases of Integumentary System	70	3	..	..	..	..	..	..	6	4	1	1	10	4	2	4	2	4	6	..	5	9	7	20	14	19	7	73
Accidental Suffocation	13	43	27	11	14	28	42	29	19	10	9	6	12	15	5	9	7	13	14	7	5	9	7	20	14	19	7	207	
Other Accidents .....	..	..	1	..	1	2	..	..	..	..	3	3	2	3	..	1	..	2	5	3	1	2	4	2	3	2	..	4
Homicide .....	..	..	..	..	5	17	12	6	2	..	3	3	2	3	1	1	..	2	5	3	1	2	4	2	3	2	..	40
Suicide .....	..	..	..	..	..	8	13	8	5	10	1	7	3	2	..	4	..	..	4	1	..	4	3	2	3	2	..	40
Ill-defined Causes	21	7	1	..	3	8	13	8	5	10	1	7	3	2	..	4	..	..	4	1	..	4	3	2	3	2	..	61

NOTE.—Deaths in hospitals, workhouses, and asylums, and deaths in streets or other public places have been referred as far as possible to the wards in which the deceased persons had resided.

TABLE V.—COMPARISON OF PREVALENCE OF SICKNESS AND DEATH FROM INFECTIOUS DISEASES.
(Rates calculated per 1,000 persons on the population estimated to the middle of each year).

Year.	Smallpox.		Scarlet Fever.		Diphtheria, Membranous Croup.		Typhus Fever.		Typhoid Fever.		Puerperal Fever.		Erysipelas.	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
*1899	—	—	7.31	0.49	0.69	?	0.00	—	0.66	0.14	0.03	0.00	0.97	0.04
*1891	0.11	0.02	3.42	0.21	0.48	?	—	—	0.93	0.18	0.03	0.01	0.86	0.03
1892	0.06	—	2.94	0.14	1.10	0.21	—	—	0.54	0.08	0.08	0.05	1.18	0.07
1893	2.01	0.14	3.31	0.14	0.79	0.17	0.01	—	1.00	0.19	0.11	0.08	1.75	0.05
1894	4.22	0.35	3.64	0.15	0.83	0.18	—	—	1.04	0.21	0.09	0.04	1.57	0.03
1895	0.20	0.02	6.00	0.27	1.50	0.43	—	—	0.88	0.17	0.05	0.03	1.65	0.04
1896	0.03	0.01	6.65	0.32	2.35	0.58	—	—	0.95	0.21	0.06	0.04	1.54	0.04
1897	—	—	3.81	0.19	1.41	0.32	0.00	0.00	1.06	0.18	0.03	0.02	1.16	0.04
1898	—	—	2.60	0.09	1.36	0.26	—	—	1.25	0.22	0.05	0.03	1.25	0.03
1899	—	—	2.44	0.06	1.40	0.29	—	—	1.52	0.23	0.06	0.03	1.23	0.04
1900	0.00	—	3.98	0.18	1.05	0.15	—	—	1.64	0.35	0.08	0.05	1.31	0.05
1901	—	—	6.35	0.29	1.02	0.16	—	—	1.18	0.21	0.06	0.05	1.39	0.04
1902	0.13	0.01	9.39	0.55	1.47	0.24	—	—	1.01	0.19	0.07	0.04	1.42	0.06

* Prior to enlargement of City.

TABLE VI.

NUMBER OF CASES REPORTED UNDER THE INFECTIOUS DISEASE
(NOTIFICATION) ACT, 1889, DURING EACH WEEK OF THE YEAR 1902.

Week.			Small Pox.	Scarlet Fever	Diphtheria.	Membranous Croup.	Typhus Fever.	Typhoid Fever.	Simple Continued Fever.	Relapsing Fever.	Puerperal Fever.	Cholera.	Erysipelas.	Chickenpox.	Total.
Number.	Date of ending.														
1902.															
1	January	4th .....	...	95	11	3	...	16	...	...	..	...	15	...	140
2	"	11th .....	...	69	7	...	...	15	...	...	1	...	18	...	110
3	"	18th .....	...	87	3	...	...	11	...	...	...	...	14	...	115
4	"	25th .....	...	76	10	2	...	12	...	...	1	...	13	...	111
5	February	1st .....	...	72	14	3	...	16	..	...	...	...	10	...	115
6	"	8th	1	79	12	..	...	18	..	...	1	...	16	...	127
7	"	15th .....	...	98	8	...	...	7	...	...	1	...	11	...	125
8	"	22nd	1	86	7	...	...	10	...	...	...	...	10	...	114
9	March	1st .....	...	85	11	1	...	6	...	...	...	...	7	...	110
10	"	8th .....	...	86	13	...	...	7	...	...	...	...	14	...	120
11	"	15th .....	...	85	12	2	...	7	...	...	...	...	9	..	115
12	"	22nd .....	...	59	11	1	...	5	...	...	...	...	19	...	95
13	"	29th	1	99	6	2	...	10	...	...	...	...	12	...	130
14	April	5th	1	83	10	1	...	6	...	...	1	...	16	...	118
15	"	12th .....	...	69	5	3	...	10	...	...	...	...	10	...	97
16	"	19th	2	82	11	1	...	9	...	..	...	...	13	56	174
17	"	26th	4	75	17	...	...	8	...	...	1	...	13	67	185
18	May	3rd	7	79	12	1	...	17	...	...	1	...	11	66	194
19	"	10th .....	...	75	10	2	...	8	...	...	...	...	10	63	168
20	"	17th	4	103	17	2	..	10	...	...	1	...	12	55	205
21	"	24th	6	109	16	1	...	11	..	...	...	...	12	55	210
22	"	31st	3	89	13	...	...	6	...	...	...	...	19	84	214
23	June	7th	8	131	19	1	...	4	...	...	...	...	10	88	261
24	"	14th	3	108	17	2	...	7	...	...	...	...	15	68	220
25	"	21st	6	126	15	1	...	5	...	...	2	..	17	75	247
26	"	28th	8	101	15	2	...	3	...	...	...	...	12	52	193
27	July	5th	2	130	17	1	...	9	...	...	...	...	19	114	292
28	"	12th	2	127	15	2	...	3	...	...	..	...	10	55	214
29	"	19th	3	97	29	...	...	8	...	...	2	...	13	36	188
30	"	26th	1	168	22	...	...	11	...	...	2	...	18	28	250
31	August	2nd	1	112	21	1	...	3	...	...	...	...	12	28	178
32	"	9th .....	...	129	11	...	...	...	...	...	1	...	9	19	169
33	"	16th .....	...	91	18	2	...	7	..	...	2	...	18	20	158
34	"	23rd .....	...	92	17	...	...	12	...	...	1	...	11	25	158
35	"	30th .....	...	111	13	1	...	21	...	...	1	...	17	26	190
36	September	6th .....	...	141	12	4	...	17	...	...	1	...	19	22	189
37	"	13th .....	...	87	8	...	...	22	1	1	1	...	15	9	144
38	"	20th .....	...	85	12	1	...	13	1	...	1	...	13	12	138
39	"	27th .....	...	107	14	2	...	12	1	...	2	...	13	11	162
40	October	4th .....	..	109	20	1	...	13	...	...	...	...	23	16	182
41	"	11th .....	...	103	18	2	...	8	...	...	...	...	19	11	161
42	"	18th .....	...	87	10	1	...	11	...	...	...	...	13	15	137
43	"	25th .....	...	113	16	1	...	12	...	...	2	...	8	28	180
44	November	1st .....	...	01	15	1	...	13	...	...	1	...	18	31	180
45	"	8th .....	...	107	27	3	...	14	...	...	2	...	20	31	204
46	"	15th .....	...	91	11	1	...	11	..	...	1	...	14	45	174
47	"	22nd .....	...	89	21	...	...	13	...	...	...	...	16	25	164
48	"	29th .....	...	94	12	4	...	25	...	...	...	...	14	35	184
49	December	6th	1	78	7	3	...	11	...	...	1	...	19	32	152
50	"	13th .....	...	83	10	2	...	7	...	...	1	...	10	34	147
51	"	20th	1	94	14	3	...	8	...	...	1	...	24	38	183
52	"	27th	1	73	14	...	...	7	...	...	1	...	22	34	152
53	January	3rd, 1903	2	66	14	...	...	9	...	...	1	...	16	39	147
TOTALS			69	5044	720	67	...	544	3	1	35	...	762	1548	8793

Cases removed to Hospital :—Small Pox, 68 ; Scarlet Fever, 4,534 ; Typhoid Fever, 119.

TABLE VII.

TEMPERATURE OF THE AIR AND GROUND, RAINFALL, SUNSHINE, AND WIND, IN EACH MONTH OF THE YEAR 1902.
Observed at the Birmingham and Midland Institute Observatory, Edgbaston, by Mr. Alfred Cresswell.

MONTH.	TEMPERATURE OF THE AIR.				TEMPERATURE OF THE GROUND.		HOURS OF SUNSHINE.		RAINFALL IN INCHES.		DAYS ON WHICH RAIN FELL.	MILES OF WIND.				
	Highest in the shade.		Lowest in the shade.		Mean for the Month.		1902.	Above or below the average. *	1902.	Above or below the average. *						
	1902.	Above or below the previous highest. *	1902.	Above or below the previous lowest. *	1902.	Above or below the average. *										
JANUARY	...	53.1	- 4.9	25.0	+ 14.2	39.9	+ 3.0	43.9	45.0	31	- 4	1.02	- 0.87	8	10942	+ 1044
FEBRUARY	...	54.4	- 7.5	20.6	+ 12.6	33.8	- 3.5	41.0	44.0	47	- 7	1.60	+ 0.13	11	7173	- 1927
MARCH	...	58.8	- 6.0	29.3	+ 8.0	43.9	+ 4.0	44.4	44.1	96	+ 36	1.59	+ 0.04	9	9372	- 880
APRIL	...	62.8	- 16.2	30.0	+ 3.0	45.1	0.1	47.1	45.2	149	+ 36	2.49	+ 1.15	11	9803	+ 700
MAY	...	67.7	- 9.9	32.6	+ 1.6	47.4	- 3.6	52.2	46.9	135	- 7	2.95	+ 0.99	19	9820	+ 646
JUNE	...	80.8	- 2.0	40.0	+ 1.7	56.3	- 1.4	60.0	50.9	148	- 4	2.40	+ 0.32	13	7472	- 412
JULY	...	81.4	- 6.6	42.9	+ 3.4	58.1	- 2.0	60.3	53.2	155	+ 14	1.59	- 0.56	13	8272	- 96
AUGUST	..	74.6	- 11.0	43.3	+ 2.1	57.0	- 2.1	56.9	53.5	103	- 33	4.43	+ 1.70	20	6822	- 1875
SEPTEMBER	..	69.8	- 13.0	37.4	+ 4.4	54.6	- 0.8	57.4	53.9	120	+ 6	1.49	- 0.31	14	7911	- 244
OCTOBER	.	60.1	- 9.9	38.3	+ 10.4	48.8	+ 1.5	51.3	52.3	32	- 40	2.33	0.19	14	9947	+ 1009
NOVEMBER	...	57.6	- 4.0	28.8	+ 8.0	43.4	+ 0.4	49.7	50.4	24	- 12	2.23	+ 0.03	11	8047	- 1313
DECEMBER	..	55.4	- 0.6	21.0	+ 6.5	39.4	+ 1.0	45.7	48.0	8	- 24	1.86	- 0.61	13	12206	+ 1957

* In the fifteen years 1887-1901.

TABLE VIII.

TEMPERATURE AND RAINFALL IN EACH MONTH AND YEAR FROM 1892 TO 1902.

MONTH.	MEAN TEMPERATURE.											
	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	Average for 15 years 1887-1901	1902
JANUARY ...	35.2	35.1	36.7	30.6	39.9	33.7	42.2	40.2	38.8	37.0	36.9	39.9
FEBRUARY	37.3	39.2	39.9	27.5	39.1	41.5	38.9	39.8	35.5	34.9	37.3	33.8
MARCH ...	35.6	45.3	42.6	40.4	43.5	42.8	38.1	40.1	37.0	38.2	39.9	43.9
APRIL ...	44.9	49.6	48.5	45.5	47.6	43.5	46.0	45.4	46.8	46.9	45.2	45.1
MAY ...	53.2	54.5	47.1	53.9	52.9	49.8	49.0	49.1	49.7	51.7	51.0	47.4
JUNE ..	56.5	59.0	55.6	58.0	60.7	58.4	55.7	58.8	57.4	56.6	57.7	56.3
JULY ...	56.8	61.0	59.8	58.5	61.1	61.0	58.8	62.3	63.9	63.8	60.1	58.1
AUGUST ...	59.2	62.2	56.4	59.2	56.8	60.1	57.9	63.6	58.7	60.1	59.1	57.0
SEPTEMBER	54.0	54.8	52.1	59.9	54.4	52.9	58.2	55.4	56.2	56.4	55.4	51.6
OCTOBER ...	44.5	48.8	47.2	44.8	43.3	49.1	51.0	47.7	48.7	48.3	47.3	48.8
NOVEMBER	43.2	39.9	45.1	44.6	38.9	44.6	43.8	46.6	44.2	40.1	43.0	43.4
DECEMBER	34.7	39.5	40.1	38.0	38.1	39.8	44.4	35.7	43.7	37.2	38.4	39.4
YEAR ...	46.3	49.2	47.6	46.7	48.0	48.1	48.7	48.7	48.4	47.9	47.6	47.3

MONTH.	TOTAL RAINFALL.											
	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	Average for 15 years 1887-1901	1902
JANUARY ...	1.98	1.75	1.61	3.92	1.15	1.89	0.83	3.44	3.53	1.37	1.89	1.02
FEBRUARY	1.41	2.56	2.05	0.32	0.56	2.54	1.47	1.99	4.28	1.34	1.47	1.60
MARCH ..	0.85	0.50	1.05	1.91	2.68	3.14	0.63	1.02	0.70	1.76	1.55	1.59
APRIL ...	1.23	0.33	1.62	2.37	1.33	2.02	1.85	2.40	0.92	1.95	1.34	2.49
MAY ...	1.85	2.08	2.01	0.82	0.21	1.20	2.62	2.20	2.09	1.11	1.96	2.95
JUNE ...	2.74	1.08	2.16	0.89	1.91	4.13	1.06	3.28	2.41	1.84	2.08	2.40
JULY ...	2.52	1.64	3.36	3.25	1.25	0.95	1.29	1.10	1.74	3.13	2.15	1.59
AUGUST ...	3.73	2.25	2.12	2.75	1.74	3.81	2.57	1.08	2.89	2.13	2.73	4.43
SEPTEMBER	2.97	1.72	1.70	0.45	4.34	2.48	0.64	2.80	0.80	0.65	1.80	1.49
OCTOBER ...	2.84	2.45	3.48	2.81	2.50	1.31	2.74	2.37	3.08	1.84	2.52	2.33
NOVEMBER	1.79	1.38	2.48	3.41	1.26	1.96	2.51	1.49	2.40	1.23	2.20	2.23
DECEMBER	1.69	3.02	1.88	1.99	3.34	2.78	2.24	1.95	4.25	4.29	2.47	1.86
YEAR ...	25.60	20.76	25.52	24.89	22.27	28.21	20.45	25.12	29.09	22.64	24.16	25.98

TABLE IX.

SUMMARY OF NUISANCES ABATED AND OTHER WORK DONE DURING THE
YEAR 1902.(RETURNS MADE BY MR. PARKER, *Inspector of Nuisances.*)

DWELLING HOUSES.

No. of Houses cleansed (walls and ceilings)	...	...	...	2,101
„ Houses cleansed (floors, bedding, &c.)	...	...	...	4
„ Houses repaired	...	...	...	2,935
„ Houses closed under the Public Health Act	...	...	...	82
„ Houses demolished under the Public Health Act	...	...	...	5
„ Houses put in habitable condition under the Public Health Act	...	...	...	39
„ Houses provided with better ventilation	...	...	...	200
„ Cases of overcrowding remedied	...	...	...	40
„ Accumulations of water in cellars removed	...	...	...	321
„ Rain-water Spouts repaired	...	...	...	790

CLOSETS.

No. of Ashpit Privies converted to water closets	...	...	...	874
„ Pan Privies converted to water closets	...	...	...	871
„ Privies and Closets limewashed	...	...	...	824
„ Pan Privies cleansed by Staff	...	...	...	86,493
„ Ash Sheds cleansed by Staff	...	...	...	73,058
„ Water Closets repaired	...	...	...	792
„ Pan Privies repaired	...	...	...	281
„ Ash Sheds repaired	...	...	...	378
„ Additional Water Closets provided	...	...	...	113
„ Additional Ash Tubs provided	...	...	...	1,373
„ Soilpipes removed from inside houses	...	...	...	15
„ Urinals repaired or reconstructed	...	...	...	214

DRAINAGE.

No. of Drains relaid or repaired	...	...	...	453
„ Drains opened and cleansed	...	...	...	2,523
„ Drains efficiently trapped	...	...	...	1,717
„ Drains in cellars disconnected from the sewer or abolished	...	...	...	119

No. of Sink Drains disconnected from the sewer	...	...	...	47
„ Sink Bend Pipes repaired or affixed	...	...	...	324
„ Premises supplied with additional drains	...	...	...	133
„ Smoke Tests applied to drains	...	...	...	69
„ Defects discovered thereby	...	...	...	110
„ Drains in Stables removed	...	...	...	19
„ Drain Traps cleansed by the Staff	...	...	...	176,274
„ Surface Drains cleansed by the Staff	...	...	...	79,004

OTHER NUISANCES ABATED AND WORK DONE.

No. of Back Yards paved	...	...	...	...	108
„ Back Yards repaired	...	...	...	...	316
„ Courts cleansed by Staff	...	...	...	...	4,577
„ Wash-houses repaired	...	...	...	...	262
„ Premises from which fowls have been removed	...	...	...	...	105
„ Nuisances from swine and swine styes abated	...	...	...	...	24
„ Accumulations of wash, manure, etc., removed	...	...	...	...	519
„ Dangerous Premises reported to the City Surveyor's Department...	...	...	...	...	617
„ Defective Water Fittings reported to the Water Depart- ment	...	...	...	...	790
„ Premises supplied with Corporation Water	...	...	...	...	2
„ Disused Wells filled up	...	...	...	...	1
„ Manure Receptacles provided or reconstructed	...	...	...	...	8
„ Over-flow Pipes disconnected from drains	...	...	...	...	22

DISINFECTION.

No. of Houses disinfected after Smallpox	...	...	...	67
„ „ „ „ Scarlet Fever	...	...	...	4,355
„ „ „ „ Diphtheria and Croup	...	...	...	527
„ „ „ „ Typhoid Fever	...	...	...	486
„ „ „ „ Puerperal Fever	...	...	...	29
„ „ „ „ Consumption	...	...	...	490
„ „ „ „ Measles	...	...	...	67
„ Beds and Mattresses disinfected	...	...	...	6,583
„ Sheets, Blankets, and Counterpanes disinfected	...	...	...	15,884
„ Pillows and Bolsters disinfected	...	...	...	11,215
„ Garments disinfected	...	...	...	23,685
„ Carpets disinfected	...	...	...	1,127
„ Other Articles disinfected	...	...	...	3,238

SMOKE NUISANCES.

No. of Observations made by the Inspectors	...	...	...	13,445
„ Manufacturers Reported for breaking the regulations	...	...	...	139

LODGING HOUSES.

No. of Visits by day	...	...	...	...	16,093
„ Visits by night	...	...	...	...	1,226
„ Persons found occupying the houses	...	...	...	...	25,492
„ Contraventions remedied	...	...	...	...	9
„ Keepers summoned	...	...	...	...	9

CANAL BOATS

No. of Boats registered	...	...	...	...	25
„ Boats inspected	...	...	...	...	919
„ Contraventions remedied	...	...	...	...	83

WORKSHOPS.

No. of Visits to Workshops	...	...	...	...	11,864
„ Workshops limewashed	...	...	...	...	1,327
„ „ fumigated	...	...	...	...	14
„ Sanitary defects remedied	...	...	...	...	1,071

DAIRIES, AND MILK SHOPS.

No. of Visits to Dairies	...	...	...	...	150
„ Visits to Milk Shops and Milk Stores	...	...	...	...	5,555
„ Contraventions remedied	...	...	...	...	210
„ Dirty Churns found at Railway Stations	...	...	...	...	6

BAKEHOUSES.

No. of Visits to Bakehouses	...	...	...	...	1,303
„ Bakehouses limewashed	...	...	...	...	165
„ Sanitary Defects remedied	...	...	...	...	2

UNWHOLESOME FOOD.

(Return made by MR. EDWARDS, Superintendent of the Markets.)

Voluntary Surrenders of Bad Meat	...	...	...	...	2,227
Seizures of Bad Meat	...	...	...	...	15
Weight destroyed	...	...	...	...	232 tons
Voluntary Surrenders of Bad Fish, etc.	...	...	...	...	558
Seizures of Bad Fish, etc.	...	...	...	...	5
Weight destroyed	...	...	...	...	39 tons
Weight of Bad Fruit, etc., destroyed	...	...	...	...	9 tons

CONTAGIOUS DISEASES (ANIMALS) ACT.

(Return made by MR. EDWARDS, Superintendent of the Markets.)

No. of Visits to Slaughter Houses	...	...	...	...	10,414
„ „ Railway Stations	...	...	...	...	1,181
„ „ Cow Houses	...	...	...	...	38

TABLE X.

RETURN FOR THE PERIOD 1ST JULY, 1901, TO 30TH JUNE, 1902, RESPECTING THE VACCINATION OF CHILDREN WHOSE BIRTHS WERE REGISTERED IN THE CITY DURING THE SAID PERIOD.

	Number of Births returned in the "Birth List Sheets" as Registered.	Number of these Births duly entered in Columns I., II., IV., and V. of the "Vaccination Register" (Birth List Sheets), viz. :					Number of these Births which remained unentered in the "Vaccination Register" on account (as shown by Report Book) of			Number of these Births remaining neither duly entered in the "Vaccination Register" (cols. 3, 4, 5, 6 and 7 of this Return) nor temporarily accounted for in the "Report Book" (cols. 8, 9, and 10 of this Return).
		Col. I. "Successfully Vaccinated."	Col. II. "Insusceptible of Vaccination."	Col. II. "Had Smallpox."	Col. IV. "Number in respect of whom Certificates of conscientious objection have been received."	Col. V. "Dead Unvaccinated."	Postponement by Medical Certificate.	Removal to Districts the Vaccination Officer of which has been duly appraised	Removal to places unknown or which cannot be reached; and cases not having been found.	
¹ Birmingham Parish ...	² 8,063	³ 5,763	⁴ 22	⁵ —	⁶ 27	⁷ 1,124	⁸ 123	⁹ 87	¹⁰ 803	¹¹ 114
Aston Union (within the City) ...	7,055	4,977	50	—	38	931	183	137	451	288
King's Norton Union (within the City) ...	1,755	1,431	8	—	14	135	25	25	96	21
Total ...	16,873	12,171	80	—	79	2,190	331	249	1,350	423

TABLE XI.—WATER: RESULTS OF ANALYSIS EXPRESSED IN PARTS PER 100,000.

Date of Receipt of Sample.	DESCRIPTION.	Temperature, C.	Total Solid Matter.	Organic Nitrogen.	Albuminoid or Organic Ammonia.	Free Ammonia.	Nitrogen as Nitrates and Nitrates.	Oxygen Absorbed in 4 Hours, at 27°C. (80° F.)	Previous Sewage Contamination (Estimated).	Chlorine.	Hardness.			REMARKS.
											Temporary.	Permanent.	Total.	
1902.	CORPORATION WATER.													
Jan. 8th	Rear of Nos. 2 and 3 Parcell's Buildings, Austin Street ...	6.1	27.6	.02	.008	.000	.20	.18	1,700	1.9	4.5	12.5	17.0	Clear; yellowish green.
Feb. 11th	Devey's Buildings, Stratford Street ...	2.7	31.2	.03	.010	.000	.35	.12	3,200	2.3	6.5	14.0	20.5	Very slightly turbid; green.
Mar. 4th	Bath Place, Tudor Street ...	6.1	34.8	.04	.005	.000	.35	.10	3,200	2.6	5.5	15.5	21.0	Very slightly turbid; pale green.
April 8th	Rear of 18 and 19 Saltley Street	6.7	31.6	.04	.022	.001	.15	.15	1,200	1.9	9.0	12.0	21.0	Very slightly turbid; green.
May 12th	Court No. 2 Fisher Street ...	9.5	33.6	.04	.009	.001	.25	.09	2,200	3.1	5.0	15.5	20.5	Iditto
June 9th	Rear of 5 and 7 Harborne Park Road ...	12.8	34.8	.04	.008	.001	.20	.09	1,700	2.6	8.5	14.0	22.5	Iditto.
July 2nd	1 Court, Bissell Street ...	18.6	32.4	.04	.010	.001	.10	.17	700	1.9	7.5	14.5	22.0	Clear; pale green.
Aug. 12th	Court at rear of 114 and 116 Hockley Street ...	14.0	31.2	.03	.015	.001	.20	.11	1,700	2.3	5.0	15.0	20.0	Very slightly turbid; green.
Sept. 2nd	Rear of 55 and 57 Reservoir Road ...	15.8	36.4	.04	.009	.001	.25	.15	2,200	2.6	7.0	15.0	22.0	Clear; pale green.
Oct. 8th	19 Court, Lupin Street ...	11.7	34.4	.04	.017	.000	.15	.14	1,200	1.9	7.5	18.5	26.0	Clear; pale green.
Nov 10th	13 Court, William Street ...	9.4	38.0	.03	.011	.000	.30	.12	2,700	2.7	8.5	16.0	24.5	Very slightly turbid; pale green.
Dec. 4th	Rear of 1 and 3 Marroway Street	6.7	34.4	.03	.009	.001	.25	.10	2,200	2.4	7.0	18.0	25.0	Clear; pale green.
	Average Results .. 1902	10.0	33.4	.03	.011	.001	.23	.13	1,990	2.3	6.8	15.0	21.8	
	" .. 1901	10.7	33.1	.03	.008	.000	.19	.12	1,570	2.3	9.0	14.5	23.5	
	" .. 1900	10.4	32.2	.03	.010	.000	.20	.13	1,660	2.4	8.0	12.5	20.5	
	" .. 1899	11.3	31.8	.03	.011	.001	.22	.14	1,850	2.4	6.3	12.9	19.2	
	" .. 1898	11.2	32.2	.04	.010	.001	.27	.10	2,350	2.3	7.5	14.2	21.7	

WELL WATERS.

April 12th	514 Moseley Road (complaint)	...	85.0	...	.018	.120	3.3	.11	...	9.6	...	...	34.0	Slightly turbid; green.
" 18th	506 and 508 Coventry Road...	...	116.0	...	.013	.000	4.2	.07	...	10.8	...	...	70.0	Slightly turbid; greenish grey.
June 18th	182 Aston Road ...	...	128.0	...	.013	.070	4.2	.75	...	16.0	...	...	56.0	Turbid; grey.
" 19th	Midland Hotel, New Street ...	..	20.0	...	.000	.000	0.1	.01	...	1.4	...	...	13.5	Very slightly turbid; pale green.

TABLE XII

Number of Deaths in each Street in the City of Birmingham during the
Year 1902

STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.
A			Balfour Street .. .	3		Brickilm Street .. .		
A B Row .. .		1	Balsall Heath Road .. .	4	38	Bridge Road .. .		1
Abberley Street .. .	1	1	Banbury Street .. .		6	Bridge Street .. .		3
Abbey Road .. .			Banks Road .. .	1	1	Bridge Street West .. .	7	31
Abbey Street .. .		9	Barford Road .. .	1	8	Brighton Road .. .	12	11
Abbotsford Road .. .		1	Barford Street .. .	1	49	Bristol Road .. .	1	1
Aberdeen Street .. .		17	Barker Street .. .	3	7	Bristol Street .. .		12
Ada Street .. .		1	Barlow's Road .. .			Brixham Road .. .		1
Adams Street .. .	9	27	Barn Street .. .	5	12	Broad Street .. .	2	11
Adderley Road .. .	1	19	Barnsley Road .. .		1	Bromford Lane .. .		
Adderley Street .. .	3	7	Barr Street .. .	7	21	Bromley Street .. .	1	6
Addison Road .. .		2	Barrack Street .. .		1	Bromsgrove Street .. .	2	15
Adelaide Street .. .		1	Barrows Road .. .		3	Brook Road .. .		
Albany Road .. .		2	Bartholomew Row .. .		3	Brook Street .. .		3
Albert Road .. .		1	Bartholomew Street .. .	2	10	Brookfield Road .. .	1	8
Albert Street .. .			Barwell Road .. .		1	Broom Street .. .	1	2
Albion Street .. .		4	Barwick Street .. .			Browning Street .. .	3	9
Alcester Street .. .		18	Bath Passage .. .		1	Brunet Street .. .		
Alder Drive .. .			Bath Row .. .		10	Brunswick Road .. .	4	23
Alder Road .. .			Bath Street .. .		6	Bryant Street .. .	1	2
Alexandra Road .. .		2	Beach Street .. .	9	8	Buck Street .. .	2	6
Alexandra Street .. .	3		Beaconsfield Road .. .		1	Buckingham Street .. .	3	13
Alfred Street .. .		5	Beak Street .. .		3	Bull Ring .. .		6
Algernon Road .. .		2	Beaufort Road .. .		3	Bull Street, Harborne .. .		6
Alcock Street .. .	6	9	Bedford Road .. .		3	Bull Street, Market Hall .. .	1	
Allen's Road .. .		1	Beech Lanes .. .			Bullock Street .. .	2	6
Allesley Street .. .	1	14	Beechfield Road .. .		6	Burlary Street .. .	12	12
Allison Street .. .	4	26	Belehers Lane .. .			Burlington Road .. .		1
All Saints' Road .. .		1	Belgrave Road .. .	1	29	Burney Lane .. .		
All Saints' Street .. .		1	Bellbarn Road .. .	1	38	Butler Street .. .		2
Alma Crescent .. .	1	8	Bellefield Road .. .		3	Butler Street South .. .		3
Alma Street .. .		1	Bell Street .. .			Butlin Street .. .		2
Alston Street .. .	1	14	Bellis Street .. .			Byron Road .. .		9
Alum Rock Road .. .		17	Belmont Passage .. .		4	C		
Ampton Road .. .			Belmont Row .. .	1	8	Calthorpe Road .. .	1	
Anderton Road .. .		11	Benacre Street .. .	8	16	Cambridge Crescent .. .		1
Anderton Street .. .	2	11	Bennett's Hill .. .		1	Cambridge Street .. .		1
Anderton Park Road .. .			Bennett's Road .. .	1	7	Camden Drive .. .	1	1
Andover Street .. .			Benson Road .. .	1	5	Camden Grove .. .	1	6
Angelina Street .. .	3	26	Berkley Street .. .		2	Camden Street .. .	8	50
Annandale Road .. .			Berners Street .. .		4	Camp Hill .. .		8
Anthony Road .. .		2	Berry Road .. .		4	Camp Street .. .	3	7
Arden Road .. .		13	Berry Street .. .			Canal Street .. .	1	4
Argyle Street .. .	2	13	Bertram Road .. .		3	Cannon Street .. .		
Arley Road .. .		7	Betholom Row .. .			Cannon Hill Road .. .		2
Armoury Road .. .		6	Birchall Street .. .		7	Cape Street .. .	1	6
Arsenal Street .. .	2		Birchwood Crescent .. .		2	Cardigan Street .. .	4	16
Arter Street .. .		1	Birchwood Road .. .			Carlisle Street .. .		6
Arthur Place .. .		1	Bishop Street .. .	2	17	Carlton Road .. .	2	10
Arthur Road .. .		1	Bishopsgate Street .. .	3	20	Carlyle Road .. .		
Arthur Street .. .	16	33	Bissell Street .. .	4	14	Carnarvon Road .. .		
Artillery Street .. .		5	Blackford Street .. .			Caroline Street .. .		3
Ash Road .. .		16	Black Pit Lane .. .			Carpenter Road .. .		2
Ashbourne Road .. .		2	Blake Lane .. .	1	7	Carrington Road .. .	1	5
Ashfield Road .. .			Blakeland Street .. .	3	6	Carrs Lane .. .		
Ashford Street .. .	2	8	Blews Street .. .		11	Cartland Road .. .		3
Ashley Street .. .	4	29	Bloomsbury Street .. .	2	26	Carver Street .. .	1	14
Ashted Row .. .	3	27	Blucher Street .. .	3	9	Castle Street .. .		
Aston Road .. .	3	23	Blythe Street .. .		14	Catheart Street .. .	1	8
Aston Street .. .		3	Bolton Road .. .	8	40	Cato Street .. .	1	9
Aston Brook Street .. .	2	9	Bolton Street .. .	1	1	Cato Street North .. .		4
Aston Church Road .. .	1	7	Bond Street .. .			Cattell Road .. .	3	25
Asylum Road .. .		4	Bordesley Green .. .	2	31	Cattell's Grove .. .	1	3
Athole Street .. .			Bordesley Street .. .	1	20	Cavendish Road .. .		4
Atlas Road .. .			Bordesley Green Road .. .		4	Cecil Street .. .	3	24
Auckland Road .. .		5	Bordesley Park Road .. .	4	19	Cemetery Lane .. .		
Augusta Street .. .			Bow Street .. .		7	Chad Road .. .		1
Augustus Road .. .		5	Bowyer Road .. .	2	5	Chandos Road .. .		1
Anstin Street .. .		1	Bowyer Street .. .			Chapel Street .. .	2	1
Avenue Road .. .		1	Bracebridge Street .. .	7	24	Chapel House Street .. .		3
Avery Road .. .	1	1	Bradford Street .. .	3	21	Chapman Road .. .		2
B			Braithwaite Road .. .		4	Charles Road .. .	2	15
Bacchus Road .. .	1	10	Branston Street .. .		10	Charles Arthur Street .. .	1	6
Bagot Street .. .	8	13	Brass Street .. .			Charles Henry Street .. .	3	25
Bailey Street .. .			Brasshouse Passage .. .		1	Charlotte Road .. .		
Baker Street .. .	1	41	Brearily Street .. .	10	46	Charlotte Street .. .	3	1
Balden Road .. .			Brewery Street .. .	1		Chartist Road .. .		2

NOTE.—Deaths in hospitals, workhouses, asylums, and other public places have been referred as far as possible to the streets in which the deceased persons had resided.

STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.
Chattaway Street		7	Dallwood Road			Fazeley Street	4	8
Cheapside	2	36	Dalton Street			Fellows Lane		
Cheatham Street		3	Darnley Road		1	Fifth Avenue	1	2
Chequers Walk		3	Dart Street			Finsbury Road		
Cherry Street			Dartmouth Street	8	34	Fisher Street		5
Cherrywood Road	3	14	Darwin Street	8	30	Floodgate Street	2	13
Chester Street		5	Dawson Street		4	Florence Street	3	5
Chesterton Road	12	7	Dean Street		3	Floyer Road		3
Cheston Road	1	2	Dearman Road	1	1	Ford Street	3	17
Chicheley Street		8	Defford Road		3	Fordrough Lane		
Chiswell Road	1	3	Denbigh Street	1	3	Forster Street		4
Church Road		4	Dennis Road		1	Foundry Road		8
Church Street			Derby Street	2	8	Fountain Road		
City Road		3	Devon Street	2	23	Fowler Street		1
Claremont Road		2	Devonshire Street	4	23	Fox Street		8
Clarence Road		5	Digbeth	3	7	Francis Road		
Clarendon Road		2	Digby Street	1	5	Francis Street		26
Clark Street	7	12	Dixon Road		1	Frank Street	2	4
Claverdon Street		5	Doe Street	1	2	Frankfort Street	6	16
Claybrook Street	1	1	Dolman Street	1	10	Franklin Street		5
Clayton Road		5	Dolobran Road	2	4	Frederick Road		6
Clement Street	1	2	Don Street		6	Frederick Street	1	6
Cleve Terrace		4	Dora Road		1	Freeman Road		4
Clevedon Road		8	Doris Road		3	Freeman Street		
Clifton Road	4	20	Dorset Road			Freeth Street	4	10
Clinton Road	2		Dover Street	1	4	Friston Street	2	15
Clissold Street	1	3	Drayton Road					
Cliveland Street	4	2	Drew's Lane					
Clodeshall Road	3	1	Drury Lane		4			
Clyde Street		1	Dryden Road					
Coleman Street		14	Duchess Road		5			
Coleshill Street	3	24	Duddleston Row		8			
College Road		8	Duddleston Mill Road	5	16			
College Street	3	11	Dudley Road	2	20			
Colmore Row		4	Dudley Street		5			
Colville Road		9	Dugdale Street	1	4			
Commercial Street		2	Duke Street	3	11			
Common Lane			Dymoke Street	2	12			
Communication Row	4	7						
Congreve Street								
Constance Road		1						
Constitution Hill		8						
Conway Road								
Conybere Street	3	18						
Cook Street		5						
Cooksey Road	9	25						
Cope Street		7						
Coplow Street	1	16						
Coralie Street		4						
Cornwall Street		1						
Coronation Road								
Corporation Street	1	1						
Cotterill's Lane								
Couchman Road		2						
Court Road	1	4						
Court Oak Road	1	4						
Coventry Road	1	37						
Coventry Street	2	11						
Cowper Street	5	16						
Cox Street		5						
Cox Street West	1	9						
Coxwell Road	1	3						
Crabtree Road	1	9						
Craddock Road	1	6						
Cranbury Street		2						
Cranby Street	1	3						
Cranmore Street	1	5						
Crawford Street	1	12						
Cregoe Street		14						
Crescent		6						
Cromer Road								
Crompton Road		3						
Cromwell Street	5	49						
Crosbee Road								
Cuckoo Road	2	13						
Cumberland Street	1							
Curzon Street		3						
Cuthbert Road	4	9						
Cyril Road		7						
D								
Daisy Road	1	3						
Dale End		2						

STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.
Green Street, Deritend ..	1	5	Holliday Street ..	1	12	Latimer Street ..	4	15
Green Street, Saltley ..	1		Hollier Street ..	1	2	Lawden Road ..	2	7
Greenfield Crescent ..		5	Holloway Head ..	4	11	Lawford Street ..	12	5
Greenfield Road		6	Holly Road			Lawley Street ..	7	21
Greenway Street	5	23	Holmwood Road ..		1	Lawrence Street ..		1
Grosvenor Road			Holt Street	4	8	Lawson Street ..		1
Grosvenor Street			Homer Street	1	4	Laxey Road		2
Grosvenor Street West ..	2	30	Hooper Street		5	Leach Street		4
Grove Lane			Hope Street	3	35	Leamington Road ..		6
Grove Street			Horse Fair			Lease Lane		3
Guest Street	1	8	Hospital Street	8	58	Ledsam Street	4	20
Guildford Street	2	12	Howard Street	1	5	Lee Bank Road	1	22
Guthrie Street			Howe Street	1	9	Lee Crescent	2	2
H			Hubert Street			Lee Mount		
Hack Street		1	Hugh Road	1	6	Leek Street		
Haden Street		1	Humpage Road		5	Lees Street		12
Hadley Street	3	5	Hunter's Road		1	Legge Lane	2	
Hagley Road		16	Hunter's Vale		5	Legge Street	3	18
Halberton Street		3	Hurst Street	4	22	Leigh Road		
Hall Road		2	Hutton Road			Lench Street		
Hall Street		2	Hyde Road		6	Lennox Street	3	8
Hallam Street	1	2	Hylton Street		2	Leonard Street	2	2
Hampden Street		2	I			Leopold Street	3	19
Hampton Street	2	12	Icknield Square ..	5	9	Leslie Road	1	1
Hams Road			Icknield Street ..	1	23	Lime Grove		
Handsworth New Road ..		4	Icknield Port Road ..	7	38	Lincoln Street	1	7
Hanley Street	4	9	Inge Street	4	10	Lingard Street	3	5
Hanover Street		3	Ingleby Street		19	Link Road		1
Harborne Road		3	Inkerman Street	1	22	Lionel Street		
Harborne Park Road ..	1	2	Irving Street	5	29	Lister Street		3
Harbury Road		2	Islington Row		2	Little Ann Street	2	5
Harding Street	1	1	Ivy Lane		2	Little Barr Street ..	1	3
Harford Street			J			Little Bow Street ..		2
Harold Road		2	Jakeman Road			Little Broom Street ..	1	2
Harris Road			Jakeman Walk			Little Edward Street ..		2
Harrison's Road		1	Jamaica Row			Little Francis Street ..		1
Hart's Road		2	James Street			Little Green Lane ..		19
Hartop Road		8	James Turner Street ..	2	7	Little King Street ..	1	7
Hatchett Street	3	16	James Watt Street ..		2	Little Shadwell Street		1
Havelock Road	3	11	Jenkins Street	1	3	Liverpool Street	3	1
Hawkes Street	4	9	Jennens Row	9	9	Livery Street		2
Hawthorn Road			Jersey Road		2	Lloyd Street		1
Heath Street	8	35	John Bright Street ..		1	Lodge Road	4	19
Heath Street South		1	Johnson Street	3	3	Lombard Street	1	4
Heath Green Road		2	Johnstone Street		3	Long Acre	2	24
Heath Mill Lane	1	14	K			Long Street	2	5
Heaton Street	3	15	Keeley Street ..	1	4	Longbridge Road		6
Helena Street		2	Kendal Road ..		3	Longmore Street	2	10
Heneage Street	8	38	Kenelm Road	1	3	Lonsdale Road		
Henley Street	1	10	Kent Street	1	6	Lord Street	3	11
Henn's Walk		1	Kent Street North ..	2	4	Lordwood Road		3
Henrietta Street		1	Kenyon Street	1	8	Louisa Street		
Henry Street	1	21	Key Hill		8	Love Lane	2	
Henshaw Road	3	6	King Street		5	Loveday Street		3
Herbert Road	2	23	King Alfred's Place ..	1	1	Lowe Street		
Hermitage Road		1	King Edward's Place ..			Lower Dartmouth Street	3	3
Herrick Road	2	2	King Edward's Road ..	4	24	Lower Darwin Street ..		1
Hertford Street	4	2	Kingscote Road		1	Lower E-sex Street ..	4	8
Hicks Square	1	2	Kingsley Road	1	2	Lower Loveday Street ..		
Hick Street	1	10	Kingston Road	1	4	Lower Priory		
Hickman Road		1	Kingswood Road		1	Lower Temple Street ..		
High Street			Kirby Road			Lower Tower Street ..	5	33
High Street, Bordesley, and Deritend	5	30	Kitchener Street ..		5	Lower Trinity Street ..	6	6
High Street, Harborne ..		13	Knitsford Street ..		3	Loxton Street	1	5
High Street, Saltley	1	4	Kyott's Lake Road ..	2		Ludgate Hill		2
Highfield Rd., Edgbaston			Kyrwick's Lane	5	10	Lupin Street	6	12
Highfield Road, Saltley ..	1	11	L			Lyttelton Road		
Highgate Place		1	Ladypool Road ..	4	18	M		
Highgate Road	4	28	Ladywell Passage ..		1	Macdonald Street	1	8
Highgate Square			Ladywell Walk			Magdala Street		
Highgate Street	5	21	Ladywood Road	4	15	Main Street		7
High Park Street		5	Lancaster Street	2	14	Malins Road		
Hill Street		3	Landor Street		6	Malmesbury Road		8
Hinckley Street			Langley Road		9	Malthouse Lane	1	5
Hingeston Street	1	15	Lansdowne Street ..	1	9	Malvern Street	1	1
Hobmoor Road		4	Larches Street	3	12	Malvern Hill Road		5
Hockley Hill		4				Manchester Street	2	1
Hockley Street	1	5				Manor Road		
Holborn Hill		5				Mansell Road		
Holder Road		1				Margaret Street		2
Holland Street		5				Margaret Road		
						Mark Lane		1

STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.
Markby Road	3	9	Noel Road		4	Potter Street		6
Market Street		1	Norfolk Road		2	Powell Street	1	
Marlborough Road			Norman Street	2	12	Prescott Street	2	16
Marroway Street	12	8	North Road	1	3	Preston Road	2	9
Marshall Street	12	4	Northampton Street		1	Pretoria Road		1
Marshall Street South	12	3	Northbrook Street	1	1	Price Street	2	13
Martineau Street		1	Northfield Road	1	5	Priestley Road	1	4
Mary St., Balsall Heath		17	Northumberland Street	5	2	Prince Albert Street	1	7
Mary Street, St. Paul's			North Warwick Street			Prince Arthur Road		
Mary Ann Street			Northwood Street	1	12	Princes Row		1
Masshouse Lane		1	Norton Street	2	4	Princes Street	1	3
Maxstoke Street			Norwood Road		2	Princess Road	1	
Meadow Road			Nova Scotia Street		3	Princip Street		13
Medlicott Road		3	Nursery Road		2	Priory Road		1
Melville Road						Pritchatt's Road		
Membury Road		3	O			Pritchett Street	5	26
Meriden Street	3	13	Oakfield Road		3	Proctor Street	3	12
Metchley Lane		9	Oakley Road		2	Prospect Row		1
Metchley Park Road			Old Square		1			
Metropolitan Road			Old Church Road		2	Q		
Midland Street		4	Old Cross Street	1		Queen Street	1	6
Miles Street	5	15	Oldfield Road	4	17	Queen's Park Road		3
Milk Street	3	10	Old Meeting Street					
Mill Lane		9	Oliver Road	1	1	R		
Mill Street	1	4	Oliver Street		4	Radnor Street		2
Miller Street	5	18	Ombersley Road	1	8	Raglan Road		
Milton Street	2	4	Oozells Street		2	Railway Terrace	1	4
Milward Street		6	Oozells Street North		3	Ralph Road		
Moat Lane		1	Orchard Road		3	Rann Street		5
Moat Row			Orford Road		2	Ravenhurst Road	1	6
Moilliett Street	2	8	Ormond Street	3	7	Ravenhurst Street	1	17
Moland Street	4	26	Osborn Road		3	Rawlins Street		10
Mole Street		8	Osler Street	4	14	Raymond Road	1	6
Mona Road		3	Oughton Place		4	Rea Street	3	28
Montague Road			Owen Street	4	9	Rea Street South	1	2
Montague Street		6	Oxford Street	1	10	Redhouse Road		1
Montgomery Street	1	6	Oxygen Street		5	Regent Parade		
Montpellier Street		1				Regent Place		1
Monument Road	3	21	P			Regent Road		1
Moor Street	1	3	Paddington Street	2	7	Regent Row		3
Moore's Row		3	Paignton Road		1	Regent Street		
Moorsom Street	4	18	Pakenham Road		1	Regent Park Road		4
Moreton Street		3	Palace Road	4	7	Reginald Road		9
Morville Street	2	9	Palmer Street		5	Reservoir Retreat		
Moseley Road	3	43	Palmerston Road	2	2	Reservoir Road		3
Moseley Street	6	25	Parade		2	Richard Street	7	23
Mostyn Road			Paradise Street		3	Richmond Hill Road		1
Mott Street	1	5	Park Lane	2		Ridley Street		2
Mount Pleasant		2	Park Road	5	36	River St., Balsall Heath	2	11
Mount Street		8	Park Street	3	17	River St., St. Bartholomew's	1	1
Muntz Street	1	13	Parkfield Road	2	3	Robert Road		2
Musgrave Road	1	6	Park Hill Road		6	Rocky Lane	1	10
Myddleton Street		1	Parker Street	2	8	Rodway Street	2	
			Parliament Street	2	4	Ronald Road		2
N			Paxton Road	2	3	Rosalie Street	2	3
Nansen Road	1	1	Pearson Street	1	2	Rose Road		
Navigation Street		2	Pebble Mill Road			Rosebery Street		8
Nechells Place	1	6	Peel Street	3	21	Roshven Road	2	4
Nechells Park Road	1	26	Pemberton Street	2	2	Rotton Park Road		8
Needham Street	1	3	Pembroke Road		1	Rotton Park Street		
Needless Alley			Penn Street		3	Rowland Street		3
Nelson Street	8	24	Percival Road		1	Runcorn Road		5
New Road			Perrot Street		3	Rupert Street	2	6
New Street		1	Pershore Road	1	18	Rushbury Road		
New Bartholomew Street		4	Pershore Street	2	9	Russell Street		2
New Bond Street			Phillimore Road	1	8	Ruston Street	5	20
New Canal Street		17	Phillip Street			Rutland Road		1
Newdegate Street		2	Pickford Street		8	Ryder Street	1	2
Newhall Hill	1	4	Piddock Street		12	Ryland Road	2	11
Newhall Street		8	Pigott Street	2	7	Ryland Street	2	7
New John Street	13	31	Pitney Street			S		
New John Street West	8	63	Pitsford Street		1	St. Andrew's Road	5	19
New Market Street			Pitt Street			St. Augustine's Road		
New Meeting Street		1	Plough and Harrow Road			St. Clement's Road	1	7
Newport Road		1	Plume Street			St. George's Place		4
New Spring Street	3	20	Pope Street	2	11	St. George's Street	3	14
New Summer Street	19	29	Poplar Avenue		2	St. James' Place	1	6
Newton Street		7	Poplar Road		1	St. James' Road		
Newtown Row	9	16	Porehester Street		4	St. James' Street	1	8
Nigel Road		4	Porthope Road		1	St. John's Road		1
Nile Street			Portland Road		1	St. Luke's Road	3	8
Nineveh Road								

STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.	STREETS.	Zymotic Diseases.	Other Diseases.
St. Margaret's Road	1	1	Station Avenue			Upper Mill Lane		
St. Mark's Street	3	23	Station Road		2	Upper Priory		
St. Martin's Lane			Station Street			Upper Ryland Road	1	3
St. Martin's Place			Stechford Lane			Upper Trinity Street	2	12
St. Martin's Row			Steelhouse Lane		4			
St. Martin's Street		18	Stella Street		3	V		
St. Mary's Road		1	Stephenson Place			Varna Road		9
St. Mary's Row		2	Stephenson Street			Vaughton Street	3	16
St. Mary's Street		5	Steward Street	4	18	Vaughton Street South		4
St. Oswald's Road		3	Stirling Road		1	Vauxhall Grove		1
St. Paul's Road		12	Stoke Street	1	11	Vauxhall Road	1	24
St. Paul's Square			Stone Yard		1	Vauxhall Street		3
St. Peter's Place			Stoney Lane	1	10	Venetia Road		3
St. Peter's Road		3	Stour Street	4	10	Ventnor Road		7
St. Saviour's Road	3	8	Stratford Place		2	Vere Street		10
St. Stephen's Street		3	Stratford Road		8	Vernon Road		1
St. Vincent Street	1	11	Stratford Street	1	5	Vicarage Rd., Edgbaston		2
Salisbury Road			Strensham Road		1	Vicarage Rd., Harborne		2
Salop Street		3	Stuart Street		4	Victor Road		4
Saltley Road		15	Studley Street	1	4	Victoria Grove		
Saltley Street	2	4	Suffolk Street		4	Victoria Road		1
Sampson Road		10	Summer Lane	19	34	Victoria Street	2	9
Sampson Road North	2	2	Summer Road	1	11	Villa Street	2	9
Sand Pits	1	3	Summer Row		1	Villiers Street		3
Sand Street		4	Summer Street		1	Vincent Crescent		
Sandon Road		3	Summerfield Crescent		1	Vincent Parade	2	10
Sandy Lane	2	11	Summerfield Road			Vincent Street	3	16
Sarah Street			Summer Hill Road	4	3	Vine Street	1	5
Scholefield Street	1	23	Summer Hill Street	1	5	Vittoria Street	2	5
Scotland Street		1	Summer Hill Terrace			Vivian Road		11
Scott Street			Sun Street	1	9	Vyse Street		3
Sefton Road			Sun Street West		1			
Selly Park Road			Sutton Street	1	4	W		
Selwyn Road			Swallow Street	1	1	Walford Road		4
Serpentine Road		6	Sydenham Road	1	6	Walter Street	1	4
Severn Street		4	Sydney Road	1	4	War Lane		
Seymour St., B'sall H'th	1	2				Ward End	1	
Seymour St., St. Barth.			T			Ward Street		10
Shadwell Street		5	Talbot Street	1	8	Warner Street		4
Shakespeare Road	3	5	Talfourd Street	1	12	Warren Road		1
Sheep Street	2	9	Tarry Road	2	4	Warstone Lane	4	11
Sheepcote Lane	1	3	Taunton Road	1	4	Warstone Parade East		
Sheepcote Street	1	11	Taylor Street		4	Warwick Street	5	13
Shefford Road		2	Teall Road	1	1	Washington Street	1	7
Shenstone Road	1	3	Temple Row	1		Washwood Heath Road		18
Sherborne Street	3	28	Temple Row West			Water Street		3
Sherbourne Road	6	22	Temple Street			Waterloo Street		2
Sherlock Street	4	36	Templefield Street		2	Waterworks Road		7
Sir Harry's Road			Tenby Street	2		Watery Lane	7	39
Skinner Lane	1	11	Tenby Street North		2	Watts Road		
Skinner Street	1	7	Tennal Road	1	2	Wavell Road	1	1
Sladefield Lane			Tennal Lane			Waverley Road		4
Slaney Street		1	Tennant Street	5	17	Weaman Street	2	14
Sloane Street	2	3	Tennyson Road		3	Well Lane		
Smallbrook Street	1	3	Theodore Street	4	14	Well Street	5	16
Smith Street	7	21	Theresa Road		3	Wellesley Street	1	6
Smithfield Passage		4	Thimble Mill Lane	2	3	Wellington Road		4
Smithfield Street			Thomas Street	1	2	Wemman Street	2	10
Snow Hill		7	Thorp Street		2	Wentworth Road	2	5
Somerset Road		1	Tibbitts Lane			Westbourne Road		
Somerset Street	1	2	Tillingham Street	1	3	Western Road		
Somerville Road	1	6	Tilton Road	6	14	Westfield Road		2
South Road	3	6	Tindal Street	2	4	West Heath Road		2
South Street			Tower Street	10	37	Westley Street	1	9
Southfield Road		9	Trafalgar Road		1	Weston Street		1
Spark Street	1	3	Treaford Lane			Wharf Lane		1
Speaking Stile Walk		1	Trent Street	1	5	Wharf Street		7
Speedwell Road		5	Trevor Street		14	Wharton Street	1	5
Spencer Street		5	Trinity Terrace		1	Wheeler Street	1	25
Spiceal Street		1	Tudor Street	3	4	Wheley's Lane	1	4
Spon Terrace			Turner Street	2	7	Wheley's Road		4
Spooner Street		3	Twynning Road		1	Whitby Road		
Spring Hill	1	19				White Road		7
Spring Hill Passage	1	4	U			White Street	2	6
Spring Road		9	Unett Street	10	21	Whitehall Road	1	7
Spring Street		3	Union Passage			Whitmore Road	1	6
Spring Vale		2	Union Street			Whitmore Street	1	9
Springfield Street	1	14	Upper Cox Street	1	6	Whittall Street		2
Stafford Street		1	Upper Dean Street		2	Wiggin Street		2
Stanhope Street	2	10	Upper Gough Street	2	7			
Staniforth Street	4	14	Upper Highgate Street		5			
Stanley Road	2	2	Upper Marshall Street		7			
Stannore Road		2						

STREETS.	Zymotic Diseases	Other Diseases.	STREETS.	Zymotic Diseases	Other Diseases	STREETS.	Zymotic Diseases	Other Diseases
Willes Road		11	X			ADDENDA.		
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William Street North ..	1	2						
William Edward Street..		6						
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Willows Crescent								
Willows Road	3	8						
Wilton Street		1						
Wimbourne Road				Yardley Road	3			
Windmill Street		1		Yateley Road	1			
Windsor Street	7	29		Yew Tree Road				
Winson Street	1	13		York Road	3			
Winson Green Road	1	10		York Street	4			
Witton Street	3	18						
Wolseley Street	6	8						
Wood Lane		1						
Wood Street		2						
Woodbourne Road			Z			TOTALS	1397	8275
Woodcock Street	2	12						
Woodfield Road		5						
Wood Green Road		1						
Woodville Road								
Worcester Street		2						
Wordsworth Road	1	4						
Wrentham Street	4	13						
Wright Road	3	11						
Wright Street	1	8						
Wrottesley Street								
Wyndcliff Road		2						
Wyndham Road		1						
Wynn Street		18						

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